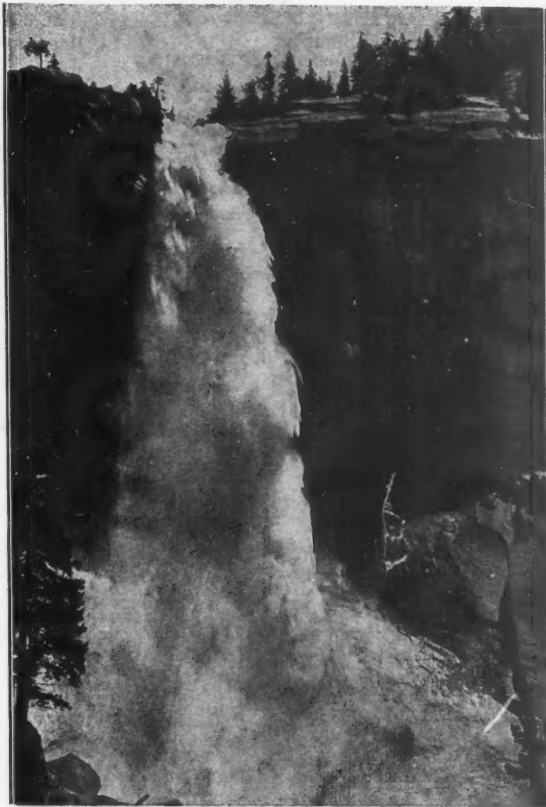


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W. E. MUSGRAVE, M. D.
CELESTINE J. SULLIVAN

VOL. XX

APRIL, 1922

No. 4

ORIGINAL ARTICLES

CORRECTION—The Editor regrets that an error was made in the March number of the Journal in giving credit for the article on "Glucose and Alkalies in Surgery" to Alanson Weeks and LeRoy Briggs, when it should have been Alanson Weeks and LeRoy Brooks.

SUPRAPUBIC VERSUS PERINEAL PROSTATECTOMY

A COMPARATIVE STUDY OF 134 PERSONAL CASES

By FRANK HINMAN, A. B., M. D., F. A. C. S.

Assistant Clinical Professor of Urology, University of California, San Francisco, Calif.

Unless men who have been trained by Young can demonstrate to their own and their colleagues' satisfaction that they have acquired from him the ability to properly perform perineal prostatectomy, and can themselves train others, this operation is in a fair way to disappear. Its technical difficulties have proven too great for general adoption. Attempts to perform it were almost universal following Young's earlier publications, but the failures are so evident that men have come to prefer the greater surgical risk of suprapubic prostatectomy because of its greater assurance of cure in their hands.¹ Young himself strongly advises against an attempt of his operation by the inexperienced. These ideas have now become so general that a majority of urologists have never done perineal prostatectomy, and others only a relatively few cases. These cases, furthermore, usually have been of the small fibrous type or unusually poor clinical risks. Other perineal operations, such as the median perineal, have also been occasionally tried. Results obtained, however, have often been ascribed to the perineal method. All results, both by the inexperienced in Young's method and perineal methods other than Young's, have been used for comparison by the suprapubist, but from what has just been said of the technical experience required and the fact that we believe that no other perineal operation is as efficient as Young's, such a comparison is unjust. The inability of the majority to perform the operation does not prove to the satisfaction of those who can perform it, that the operation when properly performed is inefficient or inferior to the suprapubic method.

¹ Delbet of Paris, for example, at the French Urologic Association, 1920, reported no mortality by way of the perineum and 17 per cent suprapubically, and yet unqualifiedly declared in favor of suprapubic prostatectomy because practically all of his perineal cases had had persistent fistulae or suffered recurrence of prostatism.

The obvious, though unintentional unfairness to Young's perineal method, has been fourfold:

1. Comparison of the results of men inexperienced in performing perineal prostatectomy with results of experts by way of the suprapubic route. The only just comparison is expert with expert.

2. The general tendency of the operator, who occasionally does both operations, to subject his poor surgical and urological risks to the perineal operation, and the more typical hyperplasia of the younger good clinical cases to the suprapubic operation, because of the recognized more benign nature of the former. The very cases that are most likely to have a poor functional result by any method have in this way been subjected to the perineal operation.

3. It is well to recognize that advanced or complicated prostatism, a type most difficult of cure, is commonly accompanied by the operative risk of a poor clinical condition, such as cardiac or renal insufficiency. A suprapubist kills off these potential functional failures, but the majority survive perineal operation, and in consequence lower the percentage of complete cures. It is only fair, therefore, that operative deaths have due consideration in the comparison of the functional results of cure, improvement or failure by the two methods.

4. Attention should be drawn to the discrepancy in statistics that is apt to arise since the more general adoption of a two-stage procedure in suprapubic prostatectomy. Those cases which do not survive the first stage are not considered as fatalities of suprapubic prostatectomy, but in our limited experience and as generally stated as that of others with a wide experience, those that do survive have weathered 80 per cent of the difficulties. Obviously such a preliminary test of vitality will eliminate both the poor clinical and urological risks from future consideration in the analysis of results of suprapubic prostatectomy. In order to complete the statistics of any series, we believe that the failures in operation, whether by catheter or cystotomy, should be accurately listed.

A more careful study of suprapubic results shows that even this operation is not so universally successful in effecting cures as many would have us believe. The general results, our own personal results in fact, are most discouraging, and it is only in the hands of experts, just as in the case of the perineal operation, that anything like satisfactory results are obtained. Whiteside found only about 30 per cent cures with mortality of over 20 per cent in general hands, and these findings have been more recently confirmed by Thomas. Two in every ten cases did not survive the opera-

tion, and three of the eight who did were not cured. Because the operation is technically easier than the perineal does not prove its simplicity nor justify its universal practice. Its successful execution requires training, and without that training the results will be poor.

Our own poor results in thirty-eight cases suprapubically are briefly given below in comparison to those obtained in ninety cases perineally.² In addition, six suprapubic failures of other surgeons, four of whom we know to be expert specialists, have come under our care during the last five years, whereas in the same time we have seen only two perineal failures of others. Five of these first had suprapubic fistulae persisting since operation for four, three, two and one years, and four months, respectively. Urologic and cystoscopic study showed marked structural defects in all six and all were complete functional failures. Cancer or vesical diverticula were definitely absent in all and, therefore, not factors. None of our own suprapubic cases were operated until after considerable experience in bladder surgery and after careful study and observation of the technic of many operators. The results, therefore, cannot be blamed wholly to poor surgery. The six total failures of others, much worse than any of our own, who are frank suprapubic exponents, appeases our conscience in this respect.

Mortality statistics following prostatectomy are fairly complete. The perineal has been universally found to be the more benign procedure. Personally we have now eighty-one consecutive unselected cases successfully operated without death, our total mortality by perineal prostatectomy being 2.2 per cent.³ Our experience suprapubically has been most unfortunate—six deaths and one suicide in thirty-eight cases, or a mortality of 15 per cent, and we cannot help but believe, in view of most of these cases being good surgical risks, that the majority would have survived, and now be living and well, had they been operated by way of the perineum.

The suprapubic cases have a distinct advantage with respect to the surgical and urological risk. They were selected on the basis of typical intravesical enlargements in good clinical condition. Of the suprapubic cases 84 per cent were in good clinical condition as compared to only 34 per cent of the perineal cases. The average age was sixty-four as compared to that of sixty-eight for the perineal. Prostatism was neither so advanced nor complicated so that surgery being successfully performed, there was good prospect of cure in 80 per cent, fair prospect in 15 per cent, and a poor chance in only 5 per cent, as compared to the urologic risk for the perineal cases of good, 60

per cent; fair, 16 per cent, and poor, 24 per cent.

An effort has been made to determine by cystoscopic and urologic study, occasionally by cystography, the late structural result of operation. Forty-eight perineal cases on an average of two years after operation, and eight suprapubic cases on an average of two years, have been so studied, with the finding of 68 per cent good structural recovery perineally, but only 38 per cent suprapubically. Thirty-two per cent of the perineal cases had fair repair of the prostatic urethra and sphincter, while one-half of the suprapubic cases were so classed. There was one failure among our earlier perineal cases, of structural restoration, a case of incomplete enucleation, whereas 12 per cent of the suprapubic cases were structural failures.

Good structural restoration is the most important factor in either perineal or suprapubic prostatectomy in securing a good functional result. The defects in structure may be the result of changes produced by the enlargement or by the surgeon, but sometimes by both. The defect common to suprapubic enucleation is the persistence of a larger or smaller prostatic cavity communicating with the bladder either by a wide funnel-shaped neck or a narrow contracted orifice. The latter are the type difficult of instrumentation or catheterization. Plication of the prostatic mucosa after the removal of large glands is the common defect following perineal prostatectomy. Tags of mucosa or hyperplastic nodules or even lobes left at the vesical neck or some portion of the prostatic cavity, are common to both methods, but are more apt to occur after perineal prostatectomy because of the common practice of removing the hyperplasia in one intact mass suprapubically and not by separate lobes or portions as is usually done perineally. It is this particular difficulty in the performance of a successful perineal operation that has appealed to the writer as the principal cause of the general disfavor of the operation, rather than the difficulty of anatomical approach, for it is this difficulty of complete, clean enucleation that leads to poor functional results or later to a recurrence of prostatism, on account of all the gland not having been completely removed. En masse enucleation with divulsion of the prostatic urethra simplifies this step of the operation and secures complete removal. We have described a procedure, with this object in view, that has now been used with slight modifications in our last twenty-five cases with 100 per cent functional cures. Just as good preservation of sphincters, veru montanum and ejaculatory ducts is possible as by Young's technic, and it has the added advantage of a more certain complete removal of all the hyperplasia, secures a better structural result, quicker surgical healing, and does not require so much technical skill to obtain what has been emphasized as the important step of any operation, a complete, clean removal.

The functional results of all cases have been determined by the careful questionnaire,* answers

² Reported in detail before the Montreal meeting of the American Urological Association, June 3, 1921.

³ We have had two deaths in ninety cases (June, 1915-April 30, 1921) operated since leaving Johns Hopkins, but we had two in the twelve cases operated by us while resident under Dr. Young at the Johns Hopkins Hospital, and in all justice to our statistics, these are excluded (4 deaths in 102 cases).

to which have been received from sixty-five perineal and twenty suprapubic cases. Perineally, there are 83 per cent cures, 7 per cent improvements and 10 per cent unimprovements, or poor functional results, as compared to 38 per cent cures, 19 per cent improvements and 43 per cent poor results suprapubically. The patients were asked to answer the direct question, "Do you consider yourself cured?" Eighty-nine per cent of the perineal cases said "Yes" unqualifiedly, while only 70 per cent of the suprapubic cases were so well satisfied as to admit a cure. The morbidity among the sixty-seven perineal cases is 16 per cent (eight deaths "since operation," two "at operation") as compared to a morbidity of 33 per cent suprapubically (three deaths since operation, six operative deaths). The deaths since operation of the perineal group would naturally be higher (15 per cent) than the suprapubic (10 per cent), because of the preponderance of poor clinical risks and generally more advanced age of this group.

SUMMARY

This analysis clearly demonstrates that in our hands Young's perineal prostatectomy excels the suprapubic operation in every respect. It has given a lower mortality, 2.2 per cent, as against 15 per cent; and a higher percentage of cures, 83 per cent as against 38 per cent, even in spite of the handicap of less promising material. We now have eighty-one consecutive unselected cases successfully operated by way of the perineum without death. Recto-urethral fistulae, persistent perineal fistulae and incontinence have been absent in all our later cases and at no time troublesome, and, though five years is the longest time since operation, we have yet to have one case return with a recurrence of prostatism.

The generally poor results that have been reported for Young's perineal prostatectomy are, in our opinion, directly blamable to the inexperience of the operator rather than the fault of the operation. With other types of perineal operations we have had no experience. Properly performed, Young's is an ideal surgical procedure, but presents two types of technical difficulty—the anatomical approach and the actual glandular enucleation. Errors in the first lead to injuries of the rectum or external sphincter; in the second, to structural defects, with either persistence of prostatism or its recurrence.

Prevention of surgical errors in the anatomical approach comes by experience and a knowledge of the anatomy of the perineum; prevention of the structural defects is best secured by a complete, clean removal of the hyperplasia. This is simpler and more certain by the modified method of enucleation whereby the hyperplastic mass can be accurately dissected out intact under direct control of the eye. In the twenty-five cases in which this perineal en masse enucleation has been used, the immediate and later results have been most gratifying, 100 per cent functional cures.

* Questionnaire

I. Urination:

1. What is your frequency of urination? ———
 - (1) Give the average number of voidings during the day ———
 - (2) Do you get up at night to void? ———
 - (a) Give the average number of times ———
 - (b) Give the approximate time of night that these voidings occur ———
2. Do you have burning on urination? ———
3. Do you have hesitancy of urination? ———
4. Do you have difficulty of urination? ———
5. Do you have dribbling of urine? ———
 - (1) Is this at end of urination? ———
 - (2) Is this between urination? ———
 - (3) Have you good control of urination? ———
6. What is the character of your urine?—(1) Clear ——— (2) Cloudy ———
7. Have you had a swollen testicle (Epididymitis)? If so was it
 - (1) Before operation?—Right ——— or left ———
 - (2) After operation and while in hospital?—Right ——— or left ———
 - (3) Since leaving hospital?—Right ——— or left ———

II. Sexual Ability:

Regarding your sexual life since operation:

1. Have you sexual desire? ———
2. Do you have erections? ———
 - (1) Are they satisfactory? ———
 - (2) Or unsatisfactory? ———
3. Have you had sexual intercourse? ———
 - (1) If not, has it been attempted? ———
 - (2) Or not attempted ———
 - (3) If so, give average frequency and character ———
4. Is ejaculation complete? ———
5. Do you have seminal discharge? ———

III. General Condition:

1. Do you consider yourself cured of your prostatic trouble? ———
 - (1) If you do not, please describe the character of your present disability ———
2. How does your general health, since operation, compare with what it was just previous to operation? ———

(516 Sutter Street)

Throwing Away Our Birthright—"The immigration problem can never be settled wisely and justly unless it be settled by those who have a vision of what the United States stands for. The United States will cease to be the land of opportunity unless we preserve unsullied and undiminished the ideals by which, and on which, this republic was created. The foreigner who hopes by plotting to win advantage for his creed over here, though he were twenty times naturalized, would remain a foreigner. He who seeks to involve the American States in the political or religious quarrels of the country from which he came is no American; he is a traitor of the baser sort. That citizen who would use his country for his private gain deserves to be uncitizenized. No true American will consent to the admission to our country of foreigners who will lower its standard in health, in morals, in intelligence, or in patriotism. Until we realize that we have inherited a sacred trust and that we must preserve it sacredly, we, too, are but imperfect Americans." (William Roscoe Thayer, in the North American Review of February.)

There is more in this article that is worth the time of any physician to read. The basic principles of right and wrong in adequate immigration laws and in effective law enforcement are medical.

THE DIFFERENTIAL DIAGNOSIS OF ECZEMATOID DISEASES

By SAMUEL AYRES, JR., M. D., Los Angeles

From the Department of Dermatology, White Memorial Hospital, Los Angeles

Anyone who comes into daily contact with patients suffering from skin diseases must be aware of the confusion which exists in the minds of most physicians and practically all of the laity in regard to that elusive dermatological scrap-heap called eczema. From the standpoint of treatment, some so-called cases of eczema differ from each other as widely as diphtheria and syphilitic sore throat. The purpose of this paper is not to offer a treatise, dealing minutely with all the possible diseases which are capable of being confused with eczema, but to indicate in a general way that there are a number of very definite and well-recognized diseases which may simulate eczema, but which must be treated according to their individual requirements. Since the etiology of many of these conditions is unknown their classification is naturally a matter of controversy and will remain subject to revision.

Darier,¹ one of the leading French dermatologists, emphasizes the fact that the eruption known as eczema is not limited to a single and specific cutaneous disease, but is a relatively common mode of inflammatory reaction of the skin toward a variety of irritants, either of external or internal origin. It is analogous to the symptom of abdominal pain, which is a mode of reaction to such widely differing causes as lead poisoning, gall stones, tabes and appendicitis.

The Eczematous Reaction.—The lesion which, above all others, is characteristic of the eczematous reaction is the vesicle, but it must be clearly understood that the vesicle is only one of a number of eruptive elements which may follow each other in a definite sequence, may co-exist, or any one of which may dominate the picture. The usual order in the appearance of the lesions is as follows: Erythema, sometimes gross edema, vesiculation, exudation, crusting, lichenification or thickening, and desquamation of crusts or scales. Papules sometimes occur, but they are frequently surmounted by vesicles or oozing pores. Pustules may result from secondary infection. Vesiculation may be so intense and confluent as to produce raw, oozing surfaces. The eruption typically passes through these stages, but it may become arrested in any one of them and continue indefinitely. In such cases, however, a few lesions typical of other stages usually occur from time to time. The onset may be acute or gradual, but the condition tends toward chronicity, frequently with acute exacerbations. The process is an inflammatory reaction, involving both epidermis and corium. The lesions are arranged in spots or patches, usually with ill-defined outlines, and are attended by a considerable amount of itching or burning. The fact that the eczematous reaction may pass through so many phases accounts in large measure for the confusion that exists.

Histologically, as well as clinically, the princi-

pal lesion of the eczematous reaction is the exudation of fluid. This begins in the corium with hyperemia, edema, and perivascular infiltration, especially in the papillary body. The plasma, which is more in the nature of an inflammatory exudate than a mechanical transudate, tends to collect in the prickle cell layer, where it infiltrates between the cells, pushing them aside and forming spaces or vesicles between them. These vesicles usually form in the deeper layers and rising to the surface with the upward growth of the cells, enlarge by further accretions of plasma and by confluence with neighboring vesicles. The vesicles may dry without rupture if the inflammation is mild, or as more commonly happens, they break through the surface of the skin, giving rise to the clinical picture of "weeping." If the edema is severe, these ruptured vesicles may remain open as oozing pores for the outlet of the plasma, which is constantly forming below. Under these circumstances secondary infection often results. Two other important histological changes are: defective cornification of parakeratosis, and in long-standing cases, an increased thickness of the prickle layer or acanthosis, which is due both to the edema and to increased cell growth.

Eczema.—There is no adequate reason, clinically, histologically, or therapeutically, for differentiating between "true eczema" and dermatitis venenata or external eczema. The etiology should be ascertained, if possible, in every case, and the treatment naturally will be modified to a certain extent, depending upon the cause. Sometimes the localization of an eruption will suggest an external origin as for example, the eruption on the hands, arms, face, and exposed part of the neck from poison ivy. The poisonous plants usually produce a more severe and acute type of eruption with greater edema than the eczemas of internal origin; the vesicles develop rapidly, cover extensive areas on exposed parts, later also on covered parts by auto-inoculation, and are closely crowded. They sometimes occur in linear arrangement due to the contact of a leaf or branch. Practically, any substance may irritate an especially sensitive skin, or even a resistant skin if applied often enough and long enough. Many cases of eczema are caused by overzealousness in the use of soap and water. A persistent dermatitis on a limited area, due to frequently repeated contact with an irritant such as chocolate in candy dippers, may in time, through a process as yet unknown, possibly allied to anaphylaxis, cause a lowered resistance or hypersensitivity of the whole body surface so that the entire skin may become involved.

Some of the internal causes of eczema are: food anaphylaxis, other obscure gastro-intestinal derangements, chronic nephritis, diabetes, varicose veins, etc. An adequate search for the causative agent, therefore, frequently requires not only a careful and searching history, but a complete physical examination, urine tests, renal function determinations, anaphylactic skin tests, etc. All of these measures sometimes fail and symptomatic treatment is all that can be offered.

Exczematoid Diseases.—Epidermophytosis is prob-

ably the most recent disease to be rescued from the eczema junk-pile.² It is caused by a fungus, the epidermophyton inguinale, which under the microscope is seen to be made up of spores and mycelia; culturally, it differs from the related tineas, which cause ringworm and other parasitic diseases.³ The recognition of this disease represents a synthesis of conditions which formerly were supposed to be unrelated. It is not always an easy matter to demonstrate the organism under the microscope. For this purpose scrapings should be taken from the deeper layers of the lesions; they should be immersed in 40 per cent potassium hydroxide on a glass slide and heated until bubbles form beneath the cover-glass.

The lesions develop and spread rather slowly; a single small patch on the hand or foot may remain localized for months and sometimes a year or more. In the genital regions, the development is more rapid. The points of election are areas where perspiration is most abundant such as the genito-crural regions, the axillæ, the interdigital spaces of the fingers and toes, the palms, the soles and sides of the feet, and sometimes the flexures of the knees and elbows. Individuals who have excessive sweating of the hands and feet are especially susceptible to the development of epidermophytosis in these locations. Between the fingers and toes the lesions consist chiefly of maceration, scaling, or a white, sodden appearance. On the palms and soles there is thickening, scaling, redness, and scattered deep-seated vesicles and vesicopustules. Here the disease very closely resembles pompholyx or dyhidrosis, but the clinical differentiation lies in the fact that pompholyx is less inflammatory, shows very little scaling and more vesiculation, and occurs in definite attacks lasting from four to six weeks, completely disappearing between attacks. Epidermophytosis frequently becomes less active during cold weather, but it may persist for months or years in some degree of activity if untreated. The lesions of epidermophytosis, pompholyx and eczema of the palms are all very itchy. In eczema there is more oozing and fissuring, and the lesions also occur on the backs of the hands, wrists, and sometimes the arms; the fungus cannot be demonstrated. Syphilis and psoriasis of the palms and soles are both dry, have no vesicles, itch little or none, and have more sharply defined margins. There are usually other evidences of these diseases elsewhere on the body. In the genito-crural regions the lesions form large red patches with little or no elevations except possibly to a slight extent along the borders. The margins are sharp, slightly scaly, and run in fairly straight lines or in a festooned design. There are frequently a number of small outlying lesions. The eruption may be bilaterally symmetrical, but is often asymmetrical. The centers of the lesions are either dry or more usually glazed in appearance, but almost never frankly oozing.

Two other diseases involving the axillary and genito-crural regions must be differentiated from epidermophytosis. Erythrasma is caused by a much smaller fungus, the microsporon minutissimum, the lesions develop more slowly, they are

more superficial, scaly, and are of a pink or buff color rather than red as in epidermophytosis. The treatment, consisting of strong anti-parasitic ointments, is the same for both conditions, and is in striking contrast to the treatment of eczema. Intertrigo is a dermatitis due to local, external causes, and may occur in two stages of development—intertrigo erythema and intertrigo eczema. Some of the causes are: insufficient bathing, excessive sweating, friction, as after a long march, fermentative diarrhea in infants, leukorrhea or diabetic urine in women. Secondary infection is common. This disorder always involves contiguous surfaces, is symmetrical, and has more diffuse borders.

Ringworm of the body is a diagnosis too frequently made. The lesions are usually few in number, are circular, tend to clear in the center and to spread peripherally with a sharp border made up of minute vesicles and crusts. It is important to remember, however, that a circular lesion with a sharp border does not always spell ringworm. Chronic recurring, localized eczemas, seborrheal eczemas or eczematides, the early lesions of mycosis fungoides, infectious eczematoid dermatitis, and other conditions, may all have very sharp borders. A microscopic examination of scrapings taken from the border of a lesion will usually reveal the spores and mycelia, if due to ringworm.

Scabies ordinarily is easily recognized, but if through lack of cleanliness and excessive scratching the lesions become eczematized and secondarily infected, or if the skin becomes irritated from overtreatment, the diagnosis may not be so clear. An oozing, crusted eczema of the breasts in women should arouse a suspicion of scabies, for the female breast is one of the areas of predilection for the parasite. In such questionable cases, a careful search for burrows should be made between the fingers and toes and about the wrists. With care, the *acarus scabei* can be picked out of one end of a burrow on a needle-point, and can be demonstrated under the microscope.

Pediculosis, whether of the head, body, or pubic region, in the absence of cleanliness may give rise to secondary eczematization from scratching and bacterial infection. Extensive pediculosis of the scalp is often responsible for an eczematous eruption of the face, neck, and upper part of the chest. Finding the eggs or "nits" in the hair of the scalp or pubic region, or in the seams of the clothing, is strong confirmatory evidence.

Among the local bacterial infections which resemble eczema, probably the most recent to be recognized as a distinct entity is infectious eczematoid dermatitis, first described by Engman of St. Louis, in 1902. The infection may have its starting point in a furuncle, an impetigo, an infected wound, a chronic discharging ear, or any overtreated skin condition. A frequent history is that a boil or an infected wound was bandaged, and the bandage not removed for several days. The resistance of the tissues thus bathed in pus becomes weakened, and the characteristic dermatitis is the result. Most cases are auto-inoculable. Sutton,⁴ of Kansas City, has found the staphy-

lococcus aureus in pure culture in most of his cases, although the *albus* occurs occasionally. The eruption is asymmetrical, usually on exposed areas, and is in the form of circumscribed patches with redness, oozing pores, vesicles, pustules, vesicopustules, and crusts. The lesions spread peripherally, and the epidermis at the border is split or undermined; there is little or no tendency for the center to heal spontaneously. The disease may respond readily to appropriate antiseptic treatment, but it may persist for weeks or months. There is practically never any pain or itching.

Dermatitis repens is another chronic infectious disease, also frequently caused by the *staphylococcus aureus*. It is relatively uncommon, bears a faint resemblance to eczema, and is usually rebellious or recurrent. Clinically, only a few lesions are present, the areas of involvement most often being the hands and feet, but no regions are exempt, and lesions may be present on the neck, arms, axillae, genito-crural area, etc. The lesion begins frequently at the site of a trivial injury. There is a red spot at first, which, in the course of a day or more, acquires a central flaccid vesicle or vesico-pustule, which on rupture shows a small amount of clear or milky fluid. The lesion enlarges peripherally, showing a ragged, undermined border, from under which the same clear or milky fluid exudes. The center becomes raw or glazed or sometimes crusted, and usually heals spontaneously while the borders are still advancing. An individual lesion may remain stationary for weeks, months, or years, or it may slowly spread, or it may entirely disappear and later recur. Subjective sensations are slight or absent. The disease was first described by Crocker, in 1888.

Impetigo usually offers no difficulty in the way of diagnosis, unless through lack of care or cleanliness or by overtreatment the course is prolonged. Under these circumstances it may take on an eczematous aspect; in fact, it may become converted into an infectious eczematoid dermatitis.

Among the diseases of unknown etiology resembling eczema, the commonest and most frequently mistaken is seborrheic dermatitis or seborrheic eczema, or according to Darier, *eczematide*, a condition which is presented in admirable detail and clarity in his recent text-book on dermatology which has been translated into English by Pollitzer.⁵ Although *eczematides* and eczema show clinically imperceptible transitions, and histological lesions which are nearly identical, Darier cites the following four reasons for placing *eczematides* in a separate class: 1. Their usual dryness; 2. The sharpness of their rounded or polycyclic outlines; 3. Their very prolonged persistence under the same aspect; 4. Their very ready curability under the influence of appropriate local treatment. Although vesiculation frequently occurs in *eczematides*, the fluid is small in amount as compared with eczema, and the vesicles usually dry and become crusted without rupturing. Without attempting to describe all the clinical varieties of this disorder, it might be profitable to mention some of the characteristics of the commonest type, the figured or seborrheal *eczematides*. The areas

of predilection are the sternum, between the scapulae, the scalp, behind the ears, and the forehead just below the hair-line. The lesions itch moderately or only very slightly, sometimes in the scalp very severely. They occur in spots or patches with rounded, polycyclic, sharply defined margins which may be slightly elevated. The centers may heal as the borders spread. The lesions are usually covered with greasy or fatty scales.

Pityriasis alba or *simplex* is a benign but very persistent disease of childhood, mildly contagious, and of unknown cause. It is usually diagnosed as "dry eczema," but may be related to the *eczematides*. The lesions are most common on the face, especially about the mouth and chin or on the cheeks. They are superficial, dry, scaly, flesh-colored or white. The outlines may be very indistinct, but are sometimes sharply defined and polycyclic. The lesions may become *eczematized*. There is usually no itching.

Lupus erythematosus is a dry, scaly eruption which usually does not occur till after the second decade of life. Characteristically, it involves the bridge of the nose, extending to the flush areas of the cheeks in the form of a butterfly. It may occur elsewhere on the body. It is chronic, but may develop rapidly. The lesions are superficial, and centrally show a certain amount of surface atrophy. The borders may advance slowly or may become stationary. The mouths of the sebaceous glands, especially about the edges, are dilated and filled with horny plugs. There may be slight itching or burning during active periods. Evidence for the tuberculous origin of *lupus erythematosus* is entirely inadequate and contradictory. When the eruption does not appear in its characteristic location on the face, it is very often called dry eczema, but the features described above should serve to differentiate it.

There is small excuse for failure to recognize the dermatitis occurring in pellagra since the clinical picture of the disease has been so carefully worked out. The diarrhea, the sore tongue, the loss of weight, the mental and neurological disturbances are all corroborative evidence. The dermatitis itself, however, is sufficiently characteristic: the greatest involvement on exposed areas, the sharpness of the borders, the almost perfect bilateral symmetry, the dry roughness, the color—at first red, later brown, sometimes with a chocolate or purplish hue.

Lichen planus is always a dry eruption except in an extremely rare variety. The itching is sometimes intolerable. The areas of predilection are the flexor surfaces of the wrists and forearms, the shins, the external genitals, and the buccal mucosa, but no region is exempt. The lesions are flat-topped, angular, shiny, violaceous, sometimes umbilicated papules which, on an average, are about the size of a pin-head, and are arranged in patches, plaques, or streaks. Discrete lesions are usually found beyond the borders of the plaques. In the mouth the patches are white and have a cross-hatched appearance.

The *erythrodermas* constitute a heterogeneous and ill-defined group of diseases, characterized by

redness in patches or large areas, usually of universal distribution, intense itching, dryness, and scaling. Some arise spontaneously, others are secondary to previously existing dermatoses, such as eczema, psoriasis, acute lichen planus, eczematide, etc. The skin is usually dry, but in severe cases there may be maceration and oozing in the articular folds or where fissures develop. All of the diseases in this group are extremely rebellious to treatment, and many of them end fatally. Although the etiology is unknown, febrile reaction, mortality, and such severe involvement points to the probability of a profound toxic disturbance somewhere. Leukemia sometimes manifests itself in the skin as erythroderma.

Mycosis fungoides, which is apparently a cutaneous lymphoma, may in its early stages masquerade for many months as eczema or as erythroderma. The resemblance to eczema is often striking, there being intense itching, oozing, and redness. The patches are too sharply outlined, however, and often are arranged in discs, ovals, crescents, or other designs, which should arouse one's suspicions that he is dealing with something other than eczema. The lesions are very resistant to all treatment except the X-rays, but will in time disappear spontaneously, to be followed, however, by the characteristic fungating tumors, which in the course of months or possibly a year or two, always terminate in death. In the early stages a microscopic examination of the tissues will usually serve to confirm the diagnosis. Sometimes a blood examination will reveal a pronounced leukemia; one case showing this combination came under my personal observation.

Dermatitis herpetiformis is almost never correctly diagnosed except by physicians who have a wide experience in skin diseases. It was first described and named by Dühring about thirty-five years ago. The disease may be toxic in origin, but the almost perfect bilateral symmetry of the eruption in most cases suggests an involvement of the nervous system as part of the process. The eruption is multifiform: on different parts of the same patient may be seen erythematous patches, vesicles, bullae, papules, pustules, crusts, scars, and pigmentation. The characteristic lesions are groups of vesicles on erythematous bases, which go through the whole range of evolution, sometimes with secondary alterations, ending in pigmented scars. The lesions itch severely and are sometimes painful. The natural history of the disease is a succession of persistent, rebellious attacks, lasting weeks or months, alternating with periods of complete or nearly complete freedom from the disease. The characteristics described above, especially the symmetry, should serve to differentiate the condition from eczema.

Erythema multiforme, pityriasis rosea, tinea versicolor, and psoriasis could hardly be confused with eczema except by the most inexperienced, unless a secondary dermatitis had been produced by improper or excessive treatment.

SUMMARY.

Many dermatoses commonly diagnosed as eczema are distinct clinical entities, which in some

instances require treatment that is diametrically opposed to that of eczema.

Eczema is not a single and specific disease, but is more in the nature of a symptom or mode of reaction on the part of the skin toward a variety of causes acting both internally and externally.

Whenever eczema is written as a diagnosis, the etiology, if ascertainable, should be included.

The failure to differentiate between eczema and conditions which more or less closely resemble it, and the failure in cases of true eczema to make an adequate search for the cause, account in large measure for the reputation which eczema has acquired of being an uninteresting and incurable disease.

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I am indebted to Dr. Ralph R. Campbell, Chief of the Department of Dermatology of the White Memorial Hospital, for his kindness in reviewing this paper.

(806 Brockman Building)

ST. LOUIS MEETING OF THE AMERICAN MEDICAL ASSOCIATION

The arrangements for the National Convention of the A. M. A. are singularly convenient for delegates and members who are planning to go from California and other Pacific Coast States. The 1922 convention of the Medical Society of the State of California will open in Yosemite National Park May 15, and will close May 18 in time for those going to the A. M. A. Convention to reach St. Louis for the opening session May 22. We are informed that the grouping of the meeting places shows a decided improvement over the accommodations which were offered by St. Louis at the 1910 meeting. Allied Sections are so closely grouped together that those who attend the convention may travel from section to section in from one to five minutes.

The registration office, postoffice and commercial exhibit is to be in the Moolah Temple (Shrine), a beautiful and commodious building on Lindell Boulevard, two blocks west of Grand avenue. At the other extremity of the group is the Odeon, with a main hall which seats more than two thousand, and several lesser halls. The main hall will be used for the opening session.

The St. Louis profession is preparing for an unusual attendance; hotel reservations are reported as coming in rapidly, but it is purposed that even the late-comer shall be comfortably housed. Dr. M. B. Clopton, 3525 Pine street, St. Louis, is chairman of the Committee on Sections and Section Work.

ORAL FOCI OF INFECTION, THEIR DIAGNOSIS, DIFFERENTIATION AND SYSTEMIC MANIFESTATIONS.*

By ROBERT BURNS, JR., D. D. S., San Francisco

Diseased teeth and their surrounding tissues are often factors in ill health. Physicians frequently fail to utilize this fact in diagnosis and treatment. A cursory inspection of the mouth and a radiogram do not furnish sufficient data to warrant conclusions. The judgment of the dentist is often inadequate because by education and habit he is primarily concerned with saving teeth and his training in pathology is restricted to a very narrow field. Dentists are inclined to look upon a tooth as something apart from the rest of the human economy to such an extent that to many an abscess is a "gum boil" to be shut off from all drainage by sealing in with a patent medicine.

The diagnosis of foci of infection in the oral cavity is not always a simple matter. Both physicians and dentists need to study more in detail the anatomy and pathology of the oral tissues. If the dental profession is too mechanical in its bent, scornful of the fact that infection at the apex of a tooth is more dangerous than the more drainage free infection in a tonsil, no small portion of the blame rests with the medical profession. For back in 1840 when the dentist, Chapin Harris, sought to interest the medical men of Baltimore in the establishment of a course in dentistry in the medical school he was repulsed. So he established the Baltimore College of Dentistry, the first dental college in the world, a movement that has resulted in an immeasurable amount of good, but after all a colossal mistake, for it set up as separate and as things apart two professions that should have been as one.

In the consideration of oral pathology, particularly with reference to systemic sequelae, I desire to lay especial stress upon the fact that a tooth is no more nor less than bone,—highly specialized bone,—hence possibly a little more prone to disease, and that with its investing tissues as it rests in its alveolus, we have represented a joint,—no more no less. An appreciation of this fact may help make clear why one of the most common results of peri-dental infection is an impairment of some other joint in the body (arthritis).

Let us consider the principal structures of the teeth.

Pericementum is the analogue and the homologue of the periosteum of bone. The only modification is that the periosteum of bone lies between a hard and a soft tissue while the *pericementum* of a tooth lies between two hard tissues.

Cementum in its function is unique in the body. Broadly speaking its only purpose is to act as an enveloping pad for the root of the tooth to reduce the impact of mastication and to afford attachment for the fibers which maintain the tooth in the socket.

Cementum is exceedingly thin, varying from 1 to 250 microns—say 1/100 of an inch. It is

entirely structureless, devoid of any histological pattern, devoid of cells, blood vessels, nervous system or lacunae. Its viability is maintained solely by the *pericementum*, a point of very great significance in considering the prognosis of peri-dental infections. *Cementum* is laid down in practically the same manner as the intra-membraneous ossification of bone: that is, upon osteogenetic fibres of connective tissue are deposited masses of small globules, the product of numerous round cells functioning as osteoblasts.

Dentin forms the greatly preponderant bulk of the tooth. It closely resembles bone. It is of mesodermic origin and its cells are similar histologically and in physiological function to *cementum*. It is not hyaline in character as is *cementum*, which, in this respect, resembles cartilage.

It contains about 28 per cent of organic matter and throughout is penetrated by a mass of tubuli with an enormous number of branches anastomosing freely. These tubuli are from 1 to 3 microns in diameter. They have their origin at the pulp and terminate at the Granular Layer of Tomes. Through them pass the Fibres of Tomes which are protoplasmic projections of the odontoblastic or genetic cells of the pulp—erroneously spoken of as the "Nerve" of the tooth. Of the pulp Noyes¹ says: "The vital function of the pulp is the formation of dentin and is performed by the layer of odontoblastic cells. These cells also, by means of their dentinal fibrils, maintain the same relation to the dentin matrix that the bone and the cement corpuscles bear to the matrix of bone and *cementum*. *When the pulp is removed* from a tooth its dentin becomes *dead dentin* in the same sense that bone in which the corpuscles have been killed is necrosed bone." (Italics mine.)

The sole blood supply of the bulk of the tooth proper, the dentin, is received by minute arteries passing into the root canal through the apex through which passes also its innervation. The blood is returned by a complete venous system and Schweitzer² has demonstrated the presence of lymphatics as well. Thus when a dentist "kills the nerve" of a tooth undoubtedly we have a dead tooth, though some men euphemistically insist that it is just merely a "pulpless" tooth! These facts explain why 80 per cent of dead teeth are infected.

The granular Layer of Tomes marks an absolute and impenetrable line of demarcation between the dentin within and the *cementum* with its *pericementum* without as shown by Marshall.³ So that when the "nerve is killed" we have absolutely destroyed beyond recovery all blood and all nerve supply to the dentin and the granular layer of Tomes prevents the possibility of any collateral circulation from the *pericementum*. Wherefor I hold that every dead tooth is a potential source of danger and in the presence of symptoms should be surgically removed.

Oral foci of infection, just for convenience, I have divided into three groups. (1) infections, acute or chronic about the apices of teeth; (2) gingivitis, pyorrhoea and infections about un-

* Read before the St. Francis Hospital Clinic Club.

erupted and impacted teeth; (3) old lesions in the maxillae or the mandible due to failure of removal of infection when teeth have been removed. The latter class are more common following the ordinary "pulling" of teeth either with or without blind attempts at curetment of the sockets, than following what for a better term we may designate "surgical removal" of teeth. Such lesions are often found in mouths entirely edentulous as are also fragments of teeth broken in attempts at pulling.

Group one are due in the great preponderance of cases to death or removal of the pulp. Death of the pulp may be caused by caries, trauma, direct as from physical injury, indirect and less violent such as results from undue stress in mastication when a filling is left too high, or when due to the irregularity of the teeth so that a particular tooth receives more than its share of stress. Similar results may be brought about following the extraction of one or more teeth, if the others, through the lack of support by continuity of the arch, move out of place. The same holds true when teeth loosen and move in pyorrhea. In these forms, death of the pulp may occur very insidiously and be entirely unsuspected by the patient, much less by the physician and often are difficult to determine by the dentist. Often the only positive means of diagnosis is actually to drill into the tooth a sufficient distance to determine the state of the pulp. This point alone emphasizes the importance of ordering complete radiographs of all the teeth and the edentulous spaces as well, rather than merely a few suspected teeth.

Given a tooth in which the pulp has died or been removed, the mere physical factors render successful treatment extremely dubious, for we have a minute root canal of capillary dimensions at the apex and it may even be tortuous. From this canal we must remove every vestige of broken down, infected tissue. Then we must render this tube sterile. Beyond this we must sterilize the maze of tortuous interlacing tubuli throughout the dentine and maintain this sterility. It simply can't be done yet. Following this we must seal the apertures of these tubuli as they open into the canal and seal the canal against both efferent and afferent bacteria or toxins. A common procedure in dentistry employed to cleanse the canal is to introduce a mixture of sodium and potassium in minute quantities. At once a violent reaction occurs as soon as the chemicals come in contact with the moisture. Fortunately the intense heat created can not do a great deal of harm in the canal, but think what must be the result upon vital cells when, as sometimes happens, that sodium and potassium passes out into the bone. Some men use sulphuric acid followed by soda bicarb. Some seal a mixture of equal parts formalin and tri-kresol. I wonder how any of these formulae would appeal to surgeons if suggested for the removal of a T. B. infection in a hip joint or a knee joint. And do not forget that a tooth in its socket is no less a joint.

After this cleansing of the canal remains the

necessity of making it bacteria proof. Some think they succeed in this by attempting to pump down just exactly to the apex some form of solid dissolved in a solvent followed generally by a gutta percha point packed in as tightly as may be. The liquid first portion is usually gutta percha in chloroform or in eucalyptus, or fiddle bow resin in chloroform. It strikes me as simply assinine to think that after the evanescent solvent has disappeared the resultant canal filling will be as dense as it was before and that it will bar passage to bacteria or to toxins. Price⁴ of the National Dental Research Institute has established the co-efficient of contraction of our canal filling materials, so much so that not many dentists now seriously claim that they actually seal canals. Some fall back upon their belief that cementum will sometimes grow over the apex of a pulpless tooth. At best such cementum is purely hyperplastic and its presence is *prima facie* evidence of an abnormal condition the result of irritation. Furthermore if the cementum ever is denuded of its pericementum it never will repair itself nor can it oxfoliate, but will remain permanently necrotic unless removed by surgical interference. Upon which evidence I assert that when a good radiogram indicates such a denuded condition about a dead tooth that tooth is doomed unless the patient, banking upon an absence of demonstrable symptoms, is determined to bet his powers of resistance against the menace. Bearing upon this factor it may be mentioned that recently, addressing a meeting of the Association of Railway Surgeons, Martin Fischer asserted that diseases of the vascular system, so often unobserved until very definite and dangerous lesions are manifest, have their inception in minute foci of infection which have been of long standing and slow progress. Striking support of this view can be found in a preliminary report by Ophuls⁶ of 500 consecutive necropsies had for the purpose of studying the relation of cardiovascular disease and of arteriosclerosis to infectious diseases. It was found that those cases wherein all history or signs of previous infection were absent, chronic arterial disease was almost lacking and made its appearance early and very frequently in the group where infection was known to have existed but was fairly well limited to chronic rheumatic (septic) conditions.

No better exemplification of such foci can be found than the slightly bleeding gums, usually the first noticed but also neglected symptom of a pyorrhoea that has been present for a number of years. Likewise granulomata at the apices of dead teeth rarely produce local symptoms.

The reason dead teeth may remain for years is that nowhere are they in physiological contact with other tissue save through the minute apical foramina and the organisms generally are of low grade, the degenerative process being slow. And yet through all the years there may be going on systemic disturbances equally slow and unobserved until unexpectedly there is observed a valvular

or a myocardial lesion or a cholecystitis or some other secondary lesion and even then the patient beyond hope of complete recovery.

The chief danger of gingivitis and of pyorrhoea lies in the insidiousness of their attack. Very often when they have reached the stage where they become apparent to the patient by reason of discomfort, the prognosis is decidedly unfavorable. More particularly is this true of pyorrhoea, for gingivitis, so long as it remains merely an inflammation of the gingiva, is entirely amenable to treatment which consists in removal of the cause—any irritation to the gum due to tartar, an ill-fitting crown, filling, or prosthesis of any sort, or irregularity of the teeth whereby food impactions occur about the gums. A gingivitis which, were it present about but one or two teeth, might be entirely negligible insofar as the possibility of systemic results were concerned, could very well be a serious matter were all of the teeth concerned because the sum total of the small ulcerating surfaces would represent a considerable area. For instance, it has been estimated that in the average mouth, if all the teeth were affected with pyorrhoea and the pockets averaged one quarter of an inch in depth, it would be equivalent to an ulcer approximating eight inches. I believe the dangers of pyorrhoea have been very much more underrated than overestimated. To begin with, practically nothing is established concerning its etiology and absolutely without exception, including those dentists who give it only the most perfunctory attention up to the men who do nothing else—the pyorrhoea specialists—all are attacking symptoms or end results, not causes. The first manifestation of pyorrhoea of which we become cognizant is an irritation of the gum, which later becomes detached from the root of the tooth. A pocket is formed, the pericementum is destroyed, the cementum becomes necrotic and all the structures infected. The dentist tries to cure this condition by scaling away the tartar, if any be present, and the dead cementum. If the pocket is not too deep, if access is such that all the necrotic cementum can be removed and if the pocket can be and will be kept clean and if the resistance of the patient is at par, in a certain percentage of cases there will be a cure—or at least a remission of the symptoms—and the best pyorrhoea specialists insist that their patients shall return regularly at intervals from one, three or six months for proper prophylaxis. In other words every pyorrhetic must be kept under exceedingly close observation.

In by far the greater number of cases there will be very scant abatement of symptoms, but constant exacerbations at varying intervals and renewed treatments, each attack accompanied by further loss of cementum, a progressive advance of the infection, until finally, if the patient lives long enough, the tooth will be lost. During all this time it is possible that there may have been no absorption sufficient to manifest any physical signs or symptoms. On the other hand there is great probability that great harm has been done and

either the dentist should be qualified to recognize these manifestations or there should be very close co-operation with the physician. For it is just as certain that a focus of infection can lie in a pyorrhoea pocket as in a pus tube.

It may savor of heresy for one of my profession to say there is very strong evidence that the treatment of pyorrhoea should be under the control of the physician. No doubt I will be held temerarious at least to assert my opinion that pyorrhoea represents a failure of the medical profession. But I do so believe because Howe at Harvard maintained perfectly healthy guinea pigs on a scorbutic diet and produced lesions that could not be distinguished from pyorrhoea. When returned to their proper ration the lesions disappeared. Generally speaking, the systemic manifestations of oral infection are as varied as we would naturally expect from a low-grade chronic infection, while it must be ever borne in mind that in certain instances the characteristics are rather those of toxemia than of bacteremia. This I believe is markedly true, for example, in hypertrophic-osteo-arthritis, where cultures may be negative, and entirely a different matter from the definitely blood-borne arthritic infections. Yet in both instances the injury is due to the primary focus.

Following operations for the removal of foci of infection too often the patient, and sometimes the physician, fall into the attitude that now the teeth are out—I shall confine myself to oral foci—the patient is bound to get well without further care, without thought of possible secondary foci that may have been set up and from which it would seem the most natural thing in the world to expect an exacerbation of symptoms. Furthermore we often forget that after a long period of struggle with a low grade, persistent infection, wherein chronicity is the outstanding feature, patients develop a state approaching anaphylaxis. They become sensitized. Some effort at least should be made to desensitize them. The greatest effort should be put forth on the part of the internist to assist Nature in the rebuilding of the sufferer. Then it is, I am inclined to think, that autogenous vaccines, if used at all, might be used with the best hope for some benefit. This, of course, is a matter solely for the physician to decide.

By far one of the commonest disorders conjoint with oral infection is a disturbance of the nervous system. Our good old standby "neurasthenia," which so often saves our face, is probably as often due to oral focal infection as any other one thing. Let me quote the words of William Hunter in an address delivered at the opening of the session of the Faculty of Medicine of McGill University on October 3, 1910, published in the London Lancet January 11, 1911. He says: "I speak from experience. The worst cases of anemia, gastritis of all kinds and degree, of obscure fevers of unknown origin, of purpura, of nervous disturbances of all kinds, ranging from mental depression up to actual lesions of the cords, of

chronic rheumatic affections, of kidney disease, are those which owe their origin to or are gravely complicated by the oral sepsis produced in private patients by these gold traps of oral sepsis."

In the *Journal of Dental Research* for March, 1920, Lewellys F. Barker, M. D., very interestingly discusses the systemic manifestations of oral foci as drawn from the work at Johns Hopkins. He reports two cases that came under his observation where embolic infections of the lung appeared to be secondary to primary periodontal infections. He further reports twenty cases of viridans endocarditis arising from septic teeth and in each instance the patient died. He says: "I desire at this time to emphasize the fact that the evidence is very strong that streptococcus viridans not infrequently enters the circulation from granulomatous areas about the teeth." Likewise he calls attention to "extra systolic arrhythmia in which premature beats of one ventricle occur, a condition often associated with pyorrhoea as well as peri-apical granulomata of the teeth." The patients describe their sensation as though the heart were turning over. Referring to the practice at Johns Hopkins he adds: "We study the mouth in all cases of arterio sclerosis and arterial hypertension to see whether or not there is any source of infection there that may be of significance. We do this not only in cases of arterio sclerosis but in every patient who comes to us for a general diagnostic study. I feel sure that the condition underlying arterial hypertension may be aggravated by long-continued infection. Though chronic infection is by no means the only cause, it may, I believe, sometimes be an important contributing factor." Referring to the accepted fact that anemias may be due to acute or chronic infections, including oral sepsis, he says: "Whether oral sepsis can be the cause of a primary, or so-called pernicious anemia, I do not know; certainly a majority of patients exhibiting this form of chronic hemolytic anemia have infected teeth but this may be merely an accidental association." Thereupon he makes this significant statement: "Dead teeth and pyorrhoea are very common in pernicious anemia and the patients more rapidly secure a remission of symptoms if you clean up the gums and remove any peri-apical infection."

Now, just a very few statistics: Hartsell and Henrici, College of Medicine, University of Minnesota, failed to find bacteria in pulps of vital, normal teeth. Organisms were found 41 times in 93 vital pulps of pyorrhetic teeth. Streptococcus viridans was present in 29 of the 41. Staph. albus in 8 such.

Carl D. Lucas, May, 1920, before the Indiana State Dental Society reported 181 cultures from dead teeth and 71 from granulomata. Total 252.

Pathogenic organisms were obtained two hundred times, about 80 per cent. These scanty figures in themselves may not be very convincing.

They are offered as simply typical of what various observers report, the aggregate of which are significant.

In 1917, before the Stomatological Section of the A. M. A., Arthur D. Black, A. M., M. D., D. D. S., Fellow of the American College of Surgeons, presented a tabulation from six thousand radiographic films of teeth and the adjacent bone in the mouths of six hundred adults. Fifty-five per cent gave evidence of bone involvements. We know that a great deal of infection exists that is not indicated by the X-ray, so the actual percentage of infection was undoubtedly greater than 55 per cent.

The eradication of oral foci of infection, with the exception of gingivitis and the earlier stages of pyorrhoea—or at least those which have failed to respond to proper attempts at treatment—falls entirely within the domain of surgery. And if, from my experience, I have reached one single definite conclusion it is that the usual "pulling" of these teeth is contraindicated. The operation of choice is surgical removal described by Novitzky,⁶ which consists of the laying back of a proper flap over the bone so that it can be removed with a chisel sufficiently to expose the area involved or, at least, give proper access with specially devised curettes after the tooth has been lifted out, having proper regard to the prime importance of minimizing trauma and reducing to a minimum, consistent with thorough work, the period of anaesthesia. At the same time we must realize that the great value of the work lies in the opportunity of painstakingly searching out every bit of pathological tissue possible. By this means only, have we reasonable hope for attaining such an object, inasmuch as only by this method, after the tooth has been removed, is it possible to control the hemorrhage and carefully explore the bone under direct vision. All rough edges are carefully smoothed, the flap trimmed as may be necessary and sutured into place. The wound heals more rapidly than is usual when teeth are just pulled. Of course, circumstances may arise when it is not advisable to suture but to pack. The operator will be governed by his judgment.

"Pulling" teeth fails because, of course, it does not remove the infection in the bone beyond the tooth itself. Attempts at curettement down the socket are mere guesswork, even when straight-rooted teeth are pulled. When the roots are tortuous, it becomes a physical impossibility to reach clear to the bottom of the socket. Furthermore, the areas of infection in bone do not occur, according to regular pattern. They may extend at right angles to the socket, absolutely precluding access unless the superimposed bone is removed. As a matter of fact, blind curettement down a socket is rather more apt merely to stir up the infection, to shove it deeper into what may have been healthy tissue and make a bad matter worse. Pulling teeth violates one of the very fundamentals of bone surgery in that it establishes a dead

space into which three times a day is forced food detritus and broken-down blood clots.

When teeth have been affected with pyorrhoëa for any length of time, the adjacent soft tissue is infected no less than the tooth itself and the bone. The mere "pulling" of such a tooth would in no degree whatsoever remove this tissue where it is no uncommon thing to find a granulomatous condition, which is very slow indeed in being thrown off by the body. And there invariably results more resorption of the underlying bone than would have occurred had all the pathological tissue been removed with the teeth—so much so that the gums and bony ridges are left in a very much worse condition for the retention of a prosthesis. Indeed, when it becomes necessary to remove all of the remaining teeth, surgical removal and a proper shaping of the bony arch and soft tissues—in short, plastic surgery, will play a very important part in the success or failure of the artificial restoration. Just exactly as the proper shaping of the bone to receive the pad of flesh under the flap of skin largely governs the success with which a wooden leg will be worn.

In conclusion, it seems hardly necessary to add that it is ridiculous to speak dogmatically. The mere presence of a dead tooth is not sufficient indication for its removal, and mere pulling may be proper under certain conditions. Complete histories of the patient are imperative, wherefor the active and sympathetic co-operation of the physician is indispensable.

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A FALSE RUMOR

This office is amazed to discover that a rumor is prevalent that members of the Indemnity Defense Fund have been assessed \$30 a year since the institution of the fund in December, 1916. This is not true. The first assessment on Fund Members will be levied this year. Those who joined it at its inauguration have had the benefit of its protection for five years without assessment of any kind for that period.

Payment of \$15 in cash and the execution of a note in the sum of \$15 due one year after date entitles any member in good standing to join the fund.

SOME CLINICAL ASPECTS OF PNEUMONIA*

By HENRY H. LISSNER, M. D., F. A. C. P.,
Los Angeles

The purpose of this paper is to discuss certain clinical impressions which were gained during the influenza epidemic from observation of over one thousand cases of pneumonia.

At the beginning of the influenza epidemic the pneumonia cases were not numerous, but as the infection increased in virulence pneumonia was present in greater numbers. We found that pneumonia developed in three different ways: (1) During the course of influenza, after the second or third day; (2) at the end of the disease, four or five days after the fever began to subside; (3) after the temperature had been normal for a few days and the patient was apparently convalescent, a sudden rise of fever and chill, with marked depression, presaged the development of pneumonia.

The most striking objective symptom of the transition from simple influenza to the pneumonia complication was the change in color of the patient. The erythematous flush of the face, neck and upper part of the thorax changed to a bluish or deep purple cyanosis, which involved not only the face and upper extremities but, in some instances, the lower extremities as well. This type of cyanosis was usually due to pneumococcic infection. Streptococcic pneumonia changed this erythema to a pale yellow waxy skin with blanched lips and finger-nails, or a color resembling muddy water, and was accompanied by profound asthenia. This change in color was obvious in pneumonia patients before the change in pulse and respiratory rate were manifest, and before definite physical signs were present.

There were no accurate means at hand by which the differentiation of the different types of pneumonia could be made clinically. It was evident very early in the epidemic that the usual physical signs of pneumonia were insufficient to cope with the multiplicity of the lesions, and that not infrequently lobar and broncho-pneumonia occurred simultaneously in the same individual. We were fortunate to have with us the Pneumonia Commission, sent by the Surgeon-General's Office and headed by Dr. Eugene Opie, so that we could follow to the post-mortem room a great many of the patients seen clinically.

A striking feature of the pneumonias was that usually two and sometimes three lobes were involved without definite distribution in either lung.

This multiplicity of infected areas made the diagnosis of the type of pneumonia difficult, accounting, in part, for the errors in diagnosis noted in the report of the Pneumonia Commission that "erroneous diagnosis of lobar pneumonia was made in 36.6 per cent of 227 fatal cases with autopsy."

Furthermore, it is my belief that many of the discrepancies between clinical and post-mortem

* Read before the San Francisco County Medical Society.

diagnoses were due in a large part to rapid examinations and hasty conclusions. It is also impossible always to make an accurate clinical diagnosis, even with the most careful examination and backed by laboratory and X-ray aid. These situations demanded extra effort to find methods by which lobar pneumonia could be more certainly differentiated from bronchopneumonia. The whispered voice sound, as reported in 1919, has been of greater value in this respect than any of the previously known objective signs of pneumonia. This sign is fairly accurate in the differential diagnosis between lobar and bronchopneumonia, except in cases of confluent bronchopneumonia, when it also fails.

From my observation of numerous cases seen clinically and followed to autopsy, I was impressed by the utter hopelessness of attempting to make a pathological diagnosis upon clinical findings. One has but to read the opinion of Opie in this respect to realize the handicap with which the clinician approaches this task.

"A diagnosis of suppurative pneumonia is rarely if ever made. The difficulties of diagnosis are in part explained by the frequent association of lobar pneumonia, with purulent bronchitis, with bronchopneumonia, or with both, and by the occurrence of bronchopneumonia with confluent lobular consolidation involving a large part of a lobe or whole lobes.

"There are many defects in the present knowledge of the symptomatology of pneumonias under consideration. Many of these deficiencies might be supplied by the time-honored method of comparing the clinical course of the disease with the changes found at autopsies, supplemented by bacteriologic studies made during life and confirmed after death."

These observations should be taken as a stimulus to the development of a clinical diagnostic acumen, which will keep abreast with the bacteriologic and pathologic progress of our knowledge of these acute respiratory diseases.

There are two types of pneumonia seen by the clinician that are important; the one from the diagnostic standpoint, and the other from the immunologic.

The first is the so-called central pneumonia. The frank pneumonias, whether of the lobar or broncho-pneumonic type, never presented any serious difficulty so far as the question of pneumonia was concerned, but in the central pneumonias diagnosis was much more obscure. Given a case of influenza in which the fever would not subside in the usual number of days, with slight increase in the pulse and respiratory rate, with the development of cyanosis, a few rales but no bronchial breathing heard and no dullness elicited, in all probability a central pneumonia is present. In this type there are three valuable diagnostic aids: First, the development of cyanosis; second, the transmission of the whispered voice sound over the consolidated area; and third, the X-ray findings. Central pneumonia is met with much more frequently than was formerly supposed. Many of the cases go unrecognized, because of the usual lack of clinical evidence upon which to base a diagnosis. In private practice, as well as in army practice, I am sure each of us can recall many cases with cough, fever, rusty sputum, etc., in

which the physical signs of pneumonia were not found, and still we felt confident of the existence of consolidation. These cases usually ran their course as central pneumonias, the pneumonic process never reaching the periphery of the lung, and were most frequently observed in the lower lobes. A careful ring-to-ring examination, with the use of the whispered voice, will generally locate the consolidated patch of the lung responsible for the symptoms. It will also differentiate between the presence of a walled-off effusion or empyema, where the shadow in the X-ray is not definite.

The second questionable pneumonia is the abortive type, which is rare.

The fear of superimposed infection is important, as the report of the commission shows that "other types of pneumococci than those primarily responsible for the development of pneumonia occurred not infrequently in a certain group of cases, either during the course of the disease or shortly after the recovery from the first attack of pneumonia. Contact infection with different types of pneumococci were directly due to infection from patients in neighboring beds. In a similar manner, superimposed infection with streptococcus hemolyticus occurred at some time during the course of pneumonia with decidedly fatal results."

The clinical significance of such data must at once be obvious. It is invaluable so far as the grouping of cases in hospitals is concerned, but the knowledge gained is particularly applicable to the care and protection of the pneumonia patient in civilian practice. The time has passed when the clinician should take an indifferent attitude toward the dangers of undue exposure to certain forms of acute infectious diseases which involve the respiratory passages. We need only to hark back to our experiences not only with the past pneumonia epidemic, but influenza and measles are fast making themselves felt by their dangerous sequellæ, and are commanding increased clinical respect. Post-measles and influenza myocarditis are not at all infrequently met with in private practice, and clinical findings verified by X-ray have thrown considerable light upon the effect of these diseases on the lungs. It behooves the physician to use every means at his command to prevent contact infection, either in the hospital ward or the sick-room, and the ways and means adopted by the army proved most efficacious after they were once put into force. These methods are well known and will not be repeated here.

In the private sick-room the protection of the patient does not present the same problems. More complete isolation is undoubtedly possible and should be insisted upon by the attending physician. There is no way of knowing, except by bacteriologic study, if the patient has contracted a second infection after his crisis is delayed beyond the expected period. Not enough physicians in private practice have their pneumonia cases typed, and if they have such a study made once at the time of establishing the diagnosis of pneumonia,

in the face of prolonged fever, too few make a second bacteriological study to determine whether or not a secondary contact infection has occurred.

In discussing secondary infection, Opie states:

"Pneumonia cannot be regarded as one disease, but must be looked upon as a group of different diseases, with more or less similar physical signs and symptoms, it is true, but caused by a considerable variety of bacteria, infection with any one of which not only provides no protection against infection with another, but even may render the individual more susceptible to secondary infection."

The fact that secondary infection is possible must of necessity revolutionize all of our previous knowledge of pneumonia, particularly from the standpoint of immunology, and must arouse in us a sense of clinical asepsis which in every way should equal the care with which a surgeon approaches an operation.

CONCLUSIONS

To sum up briefly the clinical lessons gleaned from this epidemic, I would say:

1. Cyanosis is one of the earliest objective signs of a pneumonic complication in influenza.
2. Prevention of contact infection should be sought in every case of pneumonia, with attention to early isolation.
3. Primary infection of either upper lobe is not as infrequent as was previously supposed; right middle lobe involvement is not common.
4. The pneumonia problem of the future should be looked at from the standpoint of preventive medicine and should be made a part of the problem of public health service as much as any of the other epidemic diseases.

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UNUSUAL COMPLICATIONS IN A CASE OF MIDDLE EAR INFECTION *

By ISAAC H. JONES, M. D., Los Angeles

This case report is made because it presents many unique features, and sheds some light on the problem of surgical treatment of tympano-mastoid infection, associated with labyrinth irritation. I feel that if a similar case presents itself in the future, we would handle it in the same way, but we want to emphasize that such a combination of phenomena is rarely seen, and that the treatment and handling of this case, is not to be regarded as the way to handle an average case of tympano-mastoid infection.

Briefly, the case presented an apparently mild otitis media, violent labyrinth irritation, and a very large post-auricular abscess. The superficial abscess was drained, but the internal ear region was left strictly alone—a mastoid operation was *not* done. We thought it wise to wait, although, of course, we stood ready to open the mastoid if anything occurred to suggest its necessity. This very thing happened two months later—at which time the patient began to have disquieting symptoms, and the X-ray showed unquestioned involvement of the mastoid. Mastoid operation was then advised as being the safer procedure, although it was explained to the patient that there was a possibility of spontaneous recovery. The family preferred not to have the operation; fortunately, the patient made a satisfactory recovery. A careful examination made three days ago shows normal middle ear, normal cochlea, and a complete absence of all irritative symptoms—a fact the patient is entirely well, except for a diminution of function of the vestibular portion of the labyrinth.

The patient is a male, age 33, who has enjoyed good health; is of good mentality, and has unusual ability as an organist. He served in Royal Air Force in Canada, and had not previously suffered from dizziness, staggering, deafness or tinnitus.

In November, 1920, the patient contracted an acute nasal infection, following sea bathing. He used salt water douches, "trying to dislodge what was in the nose." This caused right earache, for which he consulted a doctor, who suggested opening the drumhead. This was not permitted, so nasal and throat treatments were substituted. Had two treatments a week—for six weeks—then followed a period of six weeks without treatment, and practically without symptoms. Then a recrudescence of ear symptoms occurred, for which he again consulted the doctor, who removed polyps from left naris.

On December 8, 1920, Dr. von Wedelstaedt noted a mild congestion of the right middle ear. The patient felt a bit dizzy while at the doctor's office, and then went to the theater. It was thirty minutes after that the attack occurred.

* Read before the Fiftieth Annual Meeting of the Medical Society of the State of California, Coronado, May, 1921.

As he was playing the organ, he began to notice that he could not turn his eyes to the left; (it was necessary for him to look to the left in order to see the moving pictures, and synchronize the themes of his music with the portion of the picture being shown). He found that he could turn his entire head to the left and watch the pictures, but that he could not turn his eyes toward the left without being made violently dizzy. He managed to play for the entire thirty minutes expected of him, and then suddenly he was seized with violent vertigo and fell to the left, pitching from the organ seat down into the organ pit, where he lay for one hour and a quarter, with six attacks of nausea and vomiting, vertigo and inability to move. He was found in this condition—entirely conscious, however.

During attack:

1. External objects all whirled from his left to his right.
2. He could not look to the left without becoming more violently seasick.
3. The falling tendency was entirely to the left.
4. In the organ pit, he found some comfort by lying on the right side, and stated, "If I rolled over on my back or on my left side, it brought on seasickness."

In analyzing this, it would seem that he had a pull of the eyes to the right, and that he was more comfortable when his eyes were kept in this position toward the right. Dr. Hiller took him home, at Dr. von Wedelstaedt's request, and put him on his right side. During the night, he tried to turn to the left side and vomited each time. He once tried to turn on his back, and immediately vomited. If he tried to walk, he fell forward. Each time he got on his feet, the room would whirl from his left to his right. He continued to vomit off and on for three days. On the fourth day, he was able to retain a little food, and he found that he could then lie on his left side without getting sick. On this fourth day, Dr. von Wedelstaedt felt it wise to do a paracentesis of right drum membrane, although no pus was forthcoming. The patient had been noting a rather mild earache, and on the fifth day he began to have "an entirely different kind of an earache," caused by a quickly appearing post-auricular swelling. At this time, Dr. von Wedelstaedt referred the patient for consultation.

Examination, December 17, nine days after the attack, revealed a curious otoscopic picture; the drum membrane showed some middle ear involvement, but the most noticeable thing was a good-sized mass, in the center of which was a pouting granulation situated distinctly external to the drum membrane, and on the posterior inferior wall of the external canal. Pneumatic suction caused the drum membrane to move, but failed to affect the contour of this mass.

Incision caused this external mass to subside within twenty-four hours; no swelling of the posterior superior wall, and the day following, the drum membrane looked almost nor-

mal. It was considered possible that the large post-auricular abscess had been produced through the external canal and not through mastoid involvement. Hearing was somewhat impaired in right ear, but bone conduction was greater than normal, and Weber lateralized to affected side (right); conversational voice well heard, and whispered sibilants at three feet; both cochleas normal. Caloric test showed marked impairment of responses from right ear. This, at first, made us think that the right vestibular function was impaired; however, the turning tests produced an unusually large and prolonged nystagmus, equally after turning to the right and to the left, and demonstrated that the internal ear was not only normal but somewhat hyperactive. We considered that the impaired responses to douching could be accounted for, in that the mass in the external canal and the moderate thickening of the drum membrane together might have prevented the cooling effect from reaching the internal ear. Incidentally, it is sometimes asked why the caloric test might not make the turning test unnecessary. This data given above shows the wisdom of performing every test whatsoever that could give any information in such a serious case. If we had relied upon the douching test alone, we would surely have drawn a wrong conclusion, and would have probably concluded that the internal ear was probably becoming purulent, even though the cochlea was normal.

Summarizing—Cochlea normal, and turning showed functioning vestibular portion. The internal ear was evidently intact, in both cochlear and vestibular portions; the middle ear showed little evidence of activity; the mastoid region showed large post-auricular swelling, but with no bulging of posterior superior wall. Because of the recent labyrinth symptoms, and the danger of disturbing the quiescent state of the labyrinth, it was decided to do an exploratory operation. Under local anæsthesia, a postauricular incision was made, evacuating a large quantity of pus. The periosteum was then incised and laid back, exposing normal bone. This is all that was done. It was decided for the present to defer mastoid operation. The patient made a good immediate recovery. Two weeks later, while at a theater, he had headache, and could not walk in a straight line.

January 16, paracentesis, after which staggering gradually lessened, although he noted that external objects appeared to jump up and down.

February 1, while playing the organ, sharp pain on top of head lasting a few seconds; suddenly there was "a click in the head, as if something had snapped"; after this the sharp pain ceased, and there was a burning sensation on top of head. The next morning, on looking to the right, everything stationary; on looking to the left, objects seemed to move up and down.

February 3, again objects jumped up and down, when looking to the left. While walking with a friend on his left side, patient was continually bumping into him; sensation of pressure in back of head (lower occipital region); unable to sleep

and tossed around in bed. Mastoid operation was suggested to patient, but was refused. About one o'clock in the morning, patient "began to feel shaky" and right arm began to shake; after two or three minutes the legs commenced to shake. There had been at no time any nausea, vomiting or sweating. Since February 1, soreness and throbbing behind the right ear; on February 4, throbbing had disappeared, but soreness remained.

Neurologic examination by Dr. Samuel D. Ing-ham—"Face flushed, expression anxious; eyeballs unsteady, but no definite nystagmus, even on lateral deviation, when subjective vertical movement of objects occurred. Station good and on each foot separately—eyes open and closed—no motor cranial paralysis. Tendon reflexes in arms and legs somewhat excitable."

Eye examination by Dr. E. R. Lewis showed probable nonpathologic tortuosity of the veins. Margins of discs were not obscure.

February 5—Fistula test markedly positive. Pressure upon the drum membrane, which is entirely intact, produced a sustained rotary movement of the eyes to the left; no horizontal movement whatever; and no quick component. This air pressure also produced a subjective sensation of falling to the left, and also a subjective sensation of external objects moving upward and to the left.

Galvanic Test—Anode and kathode gave normal responses from both ears—five milliamperes—suggesting intact internal ears; in fact, there was a rather better response from the affected ear than from the other.

X-ray Examination by Dr. William Bowman—"Cells of right mastoid appear to be filled with fluid or pus, and a portion of the cell walls is destroyed at the point indicated by an arrow on the plate. Another plate was made for the purpose of checking these findings, and again the mastoid region showed marked pathologic changes, with cell destruction in the mastoid region."

The patient was willing and rather anxious to have the mastoid opened, but the family persuaded him not to have any operation. For two weeks the patient had symptoms of pain and headache, and then all discomfort disappeared. He has been perfectly well ever since—three months.

Examination right now, May 9, shows normal drum-membrane, apparently normal middle ear and perfect hearing. In fact the patient could be considered to be quite unaffected by his illness except—

1. There is a striking reduction of vestibular function, evidenced by reduction of after-turning nystagmus from 34 and 34 to 17 and 13.

2. The rather unique exenteration of mastoid cavity shown by X-ray. Dr. Bowman's report: "At a former examination the mastoid cells were murky and indistinct, but while a portion of the trabeculae had been destroyed, there were still some mastoid cells left in the lower-half of the mastoid. Now, the right mastoid region fails to reveal any evidence of any normal mastoid cells,

the trabeculation having been entirely destroyed. The bone, however, is clear and shows no evidence of any necrotic area."

SUMMARY

1. We consider it quite possible that a mastoid operation, if done in the first place, might have resulted in stirring up a purulent labyrinthitis.

2. When later it became apparent that all was not well within the mastoid, it would have been safer to have opened the mastoid antrum, when we realize that the necrosis eventually not only exenterated the mastoid, but produced a fistula into the labyrinth; it is to be regarded as simply good fortune that the refusal of operation turned out as well as it did.

3. It is unwise to generalize about cases of labyrinth involvement, except to suggest that we should show hesitation in invading the region of the internal ear during an irritative attack, unless there is urgent necessity to drain an unquestionably purulent mastoiditis. Needless to say, the average case is that of definite purulent otitis, with involvement of the mastoid antrum, and in all such cases, of course, we should not only do a thorough paracentesis, but also open the mastoid antrum. This case, however, is not an average case and it impresses us that we must not generalize, but let each individual case be a law unto itself.

THE TREATMENT OF HUNNER'S ULCER OF THE BLADDER BY FULGURATION*

By HARRY A. R. KREUTZMANN, M. D., San Francisco

In 1914 Hunner reported in detail eight cases of bladder ulcer in women of a type, which previous to that time, had not been recognized. Due to the position of the ulcers and also to the fact that so little pathology is observed cystoscopically in contrast to the severe symptoms, this condition had previously been overlooked.

Nitze described a condition of the bladder-wall, which, no doubt, is the same as that presented by Hunner. However, the credit belongs definitely to Hunner for having emphasized this condition, and having brought it forcibly to the attention of the medical profession. Since his first paper this condition has been made familiar, and about seventy-six cases have been reported.

This type of ulcer has been given a number of different names. Cullen suggested "elusive ulcer of the bladder." Geraghty called it paracystitis; Keene named it circumscribed pan-mural ulcerative cystitis because all the coats of the bladder are involved. Bumpus considers submucous ulcer of the bladder appropriate, because of the great involvement of the submucous structure. The term most commonly applied is Hunner's ulcer.

The etiology was not definitely known until Bumpus (1921) reported that he had produced

* Read before the St. Francis Hospital Clinical Group, October 28, 1921.

the typical bladder lesion in animals by the intravenous injection of pus-producing organisms, thereby strongly indicating an infectious etiology. The bladder urine is often sterile to culture, and many of the patients have no demonstrable focus of infection elsewhere in the body, nor do they have a clear history of any former infectious disease.

The pathological picture is that of a chronic inflammation involving all the coats of the bladder.

The predominating symptoms are pain and frequency of urination. The pain is of a sharp, stabbing character, usually occurring in the region of the bladder. However, it may be referred to the rectum, to the lower abdomen, to the perineum, or even to one hip. Strangury, or burning on urination may be present.

The bladder walls are thickened and contracted, and the capacity greatly reduced. This may explain some of the symptoms. The pain occurs when the bladder becomes moderately distended and the rigid wall begins to expand under the pressure. Similarly, cystoscopy, especially with the water cystoscopes, is a most painful procedure and usually cannot be undertaken except under a general anæsthetic. Frequently the symptoms are of long duration, and many of the patients have had one or more major pelvic operations performed in an unsuccessful attempt to alleviate their suffering. In the first series of eight cases which Hunner reported, the average duration of symptoms was seventeen years. These ulcers are as common in men as in women.

The patients usually fail throughout their long illness to observe hæmaturia. Hunner states that very careful repeated microscopic examinations usually will show a few red blood cells and leucocytes. This minute bleeding occurs from breaks in the mucosa due to unusual stretching of the bladder-wall, either from overdistention or trauma.

Cystoscopic examination reveals very little, considering the intensity of the subjective symptoms. A thorough examination of the bladder reveals single or multiple ulcers, most frequently located at the vault or at the sides of the bladder and never in the region of the trigone, where Fenwick's ulcer usually is located.

When viewed with the water distention cystoscope, the ulcerated area has a glazed, dead-white appearance, from which the fine blood vessels have disappeared. Segments of blood vessels are seen coursing along the white area for a short distance, and then suddenly disappearing. Either in or near the edge of the dead area, single or multiple petechial spots, resembling the small reddish areas produced occasionally when the beak of the cystoscope traumatizes the bladder wall, may be seen. Small, wavy masses of fibrin may be attached to the edges of the ulcer.

A very characteristic phenomenon is noted, when the bladder is dilated beyond its pathological capacity. Immediately a fine stream of blood begins to flow from the ulcer and trickles down

towards the base of the bladder. Very often the glazed, dead section is surrounded on all sides by an area of bullous edema.

All authors agree that the only treatment is excision of the diseased portion of the bladder. If a less dangerous procedure is available, in my estimation it should be given a fair trial before operation is attempted.

Following is the history of a patient treated successfully with fulguration alone.

CASE REPORT

B. M. Female; age, 46; no children, no miscarriages; venereal diseases denied. No history of tuberculosis, cancer, or insanity. Typhoid at six; pneumonia at twelve; no attacks of tonsillitis or peritonsillar abscess.

Present illness began in 1911, with frequency and urgency of urination. Dribbling during the day necessitated her wearing a napkin all the time. There was no dysuria or hæmaturia.

Various physicians had made diagnoses ranging from nervousness to "tumor." In 1912 patient noted that she had a constant sharp pain in the region of the bladder whenever she caught cold, but at no other time.

The patient states that she was operated upon in 1914 for "tumor." No tumor was found, but many intestinal adhesions were freed. There was no relief from symptoms, and the dribbling returned while the patient was still in bed.

During 1914 patient states that she was again operated upon for fibroid of the uterus. No fibroid was found; but the ovaries, tubes, and appendix were removed. Shortly after the second operation bladder pains developed similar to those she had previously suffered from whenever she caught cold. The pain was sharp and constant, radiating, at times, toward the perineum. When the pain was at its worst, the patient was compelled to stop whatever she was doing and remain perfectly immobile in a semi-bent position, with the left thigh flexed onto the abdomen.

Although she visited a number of physicians, complaining of frequency and great pain in the bladder, no cystoscopy was performed.

In 1919 the patient was referred to me by my father for urological examination. Urinalysis showed nothing abnormal. No red blood cells were found, but they may have been present and overlooked, as no special effort was made to identify them. Blood Wassermann was negative.

Cystoscopy under gas-oxygen revealed a whitish area on the left side of the bladder. Two small petechial spots were found above and to the left of the left ureteral orifice and on the edge of the dead area. While under observation and as the water was filling the bladder, suddenly a stream of blood began to flow from the two reddish areas towards the trigone. Urine cultures from the right kidney and the left kidney were sterile. No guinea-pig inoculation was made, but smears examined for acid-fast organisms were negative.

The diagnosis of Hunner's ulcer was made, and the patient was advised to have the diseased portion of the bladder resected. The patient refused operation. Bladder irrigations with silver nitrate were intolerable.

In April, 1920, fulguration of the bleeding areas was attempted. Due to a constant short in the electrical circuit, the trial was unsuccessful. She then went away to the country, hoping to benefit by absolute rest. On her return, her symptoms were unchanged. She still refused operation, but was finally persuaded to have fulguration performed the second time. The bleeding areas were deeply burnt until the hemorrhage stopped. The whitish area for a distance of one centimeter

about the ulcers was also fulgurated. The post-operative pain was controlled with morphine, and the patient left the hospital the next day.

Two weeks later the fulguration was repeated. She had some relief from the first sitting, and in less than a month after the second treatment her symptoms were entirely gone.

The patient has been under constant observation since that time. She voids four to five times during the day and once at night. She has been entirely free from pain throughout the past eight months.

Cystoscopy was performed the latter part of August, six months after treatment. The bladder capacity was 145 cc. The whitish area was still present. The reddened, ulcerated points had disappeared, and no bleeding occurred when the bladder was distended. It is of interest to note that there was no puckering of the mucosa, as one so often finds after fulguration of the interior of the bladder.

DISCUSSION

It may seem rather bold to say that the patient has been relieved by fulguration, in view of the fact that other physicians with large experiences have not had satisfactory results with this method of treatment.

In reviewing the literature, however, it appears that fulguration has not been given a sufficient trial to warrant its disuse. Hunner used fulguration twice in each of two different patients, and each time the patient was so much worse with pain that she refused to have it again.

Bransford Lewis used high frequency current in several of these ulcers, and found them exceedingly rebellious from every standpoint.

Buerger reported success with fulguration in one case characterized by excessive bleeding.

Fronz states that of twenty-six cases of Hunner's ulcer, which have occurred at the Brady Urological Clinic during the past five years, five were treated by fulguration. He concludes that this method of treatment is of value only in those cases in which there is a superficial involvement of the bladder wall and not where all the layers are affected; and that where possible, resection should be done in place of cauterization. None of the other authors have attempted fulguration.

CONCLUSION

The fact that this patient has remained well, though she, no doubt, had a severe lesion, as was shown by our records, indicates that treatment by fulguration under an anaesthetic is warranted before the more severe operation of resection of the bladder is attempted.

(323 Geary Street).

PROGRAM OF STATE CONVENTION

The May number of the State Journal will contain the Official Program of our 1922 State Convention at Yosemite. There will be no separate program printed for this convention, so all delegates and other members of the State Medical Society who are going to attend our annual meeting are hereby informed and urged to bring the May number of the State Journal to Yosemite.

The May number will reach you in time to be read and then placed in your grip-sack as part of your necessary Convention Equipment.

THE RADICAL MASTOID OPERATION UNDER LOCAL ANAESTHESIA *

By H. B. GRAHAM, M. D., Shreve Bldg., San Francisco

For ten years it has been our practice to do mastoid operations in acute cases under local anaesthesia, this at the suggestion of Professor Heinrich Neumann of Vienna. The technic is simple, as there is no sensation in the bone, the skin and periosteum alone are desensitized. The customary one-quarter of morphine and one hundred-fiftieth of atropine having been given a half hour before the operation, a skin and periosteum infiltration of 2 per cent novocain solution is made, particular attention being paid to the external canal. The operation is then completed as usually performed, a sharp chisel being used and small, thin chips being removed with each blow of the hammer.

About two years ago I performed a radical mastoid exenteration by this method in a case of tuberculosis of the lungs where it was unwise to give a general anaesthetic, the bridge and small bones being removed under local anaesthesia and gas used for the middle-ear curettement and the plastic work.

Since then I have done two other tubercular cases; all of these have been very satisfactory and have been so much improved in their general condition that one was lead to suspect that the ear condition was responsible for their former lack of improvement. One case showed a quiescent lung condition but was coughing considerably and running a temperature of 99. After the operation the cough completely disappeared and the temperature remained normal, the patient being discharged in four weeks completely cured in respect to his ear and with arrested lung symptoms.

Another patient has shown marked improvement in her temperature and pulse chart and has lost an annoying cough.

That there are cases where the local anaesthetic is the one of choice is without question. Kidney and lung lesions may all be conserved by this method, and it is a question whether it would not be advisable to employ it in the majority of all adult cases. The entire operation has been done under local anaesthesia by Dr. Harold Hays, but I see no advantage in employing as much morphine, or 20 per cent cocaine, as he suggested and the whole operation is much simplified by resorting to five minutes gas at the end of the operation for the middle ear and plastic work.

The operations under local are slightly longer than under ether anaesthesia, as the chiseling must be done more cautiously, but none of these took more than one hour, and one was done in thirty minutes, so the patient is not under a very severe strain mentally or physically. As a rule a brisk conversation is conducted with the patient during the operation to distract his attention from his troubles.

* Read before the San Francisco County Medical Society.

PYELONEPHRITIS: A CRITICAL REVIEW OF 100 CASES *

By LT.-COM. O. C. FOOTE, M. C., U. S. N., San Pedro

This study is based on a critical review of one hundred cases of pyelonephritis, in which a complete urological investigation has been carried out. Pyelonephritis in children and infections occurring secondary to stone, urethral obstruction, prostatic obstruction, or in association with cerebrospinal syphilis, have not been included. This narrows the study, therefore, to the etiology of infections occurring in the kidney secondary to obstructions in the ureter, malpositions of the kidney, or malpositions of the pelvic organs in women, to the question of constant injury to the kidney as the result of gastro intestinal disturbances, and to the mere accidents of infection occurring here as may occur elsewhere in the body.

Sex—Sixty-nine per cent of the patients were females. This preponderance of females is not accidental and depends upon such factors as pregnancy, malpositions of the uterus and bladder, and infections of the bladder secondary to operative procedures on the pelvic organs. It was found necessary to recommend abortion in four cases of pyelonephritis incident to pregnancy because of extreme toxemia. In seventeen others infection had been firmly established at term, probably by long months of interference with urinary drainage from the kidneys. A few pyelograms have been made of pregnant women which showed considerable dilatation of the ureter. It would be interesting to know how constant a condition this is in pregnancy, and whether it may not be responsible, for infection of the kidney, and for other toxemias of pregnancy.

Pyelonephritis was associated with oöphorectomy in seven instances, hysterectomy in two instances, and with a suspension operation in one instance. Cystoscopic study of the bladder after hysterectomy shows intense congestion and, therefore, it is susceptible to infection and may properly be considered the focus of infection for secondary kidney involvement. Catheterization of the female bladder after pelvic operation has long been held responsible for the undoubted occurrence of infection, but if this is the mode by which infection is introduced, it is only because the bladder has been rendered extremely susceptible by injury, and it would seem that as a result of this hyper-susceptibility, it might well become infected in other ways than by the introduction of the catheter. Suspension operations as a cause of pyelonephritis have not been sufficiently emphasized. During the slow descent of the uterus the patency of the ureter may be insured as it gradually assumes new positions and new relationships. When the uterus is lifted a considerable distance and put again into its normal position the ureter may be obstructed, and sufficient stasis may occur to result in infection.

It is therefore recommended that in pelvic procedures, which may result in trauma of the bladder, or in which the uterus is to be shifted

in its position, the patient should be given, previous to operation, sufficient urotropin to secure prophylactic antisepsis of the urine.

Age—The following table shows the ages of patients on admission:

From 15 to 19.....	2
" 20 to 24.....	10
" 25 to 29.....	8
" 30 to 34.....	13
" 35 to 39.....	11
" 40 to 44.....	18
" 45 to 49.....	9
" 50 to 54.....	11
" 55 to 59.....	9
" 60 to 64.....	6
" 65 to 69.....	3

It is interesting to note how few infections were found to occur in youth. A number of cases of pyelonephritis in young children have come under observation, and pyelonephritis is known to be common in children. However, a study of these cases shows that pyelonephritis has two periods in which it is frequent: one in early childhood and the other in adult life. From this the interesting deduction is warranted that nephritis occurring in children, they must recover spontaneously in the large majority of cases. Not included in this series are three cases of pyelonephritis that have been encountered in childhood and which resulted in the death of one, and marked deterioration in health of the other two. In this type of case pelvic lavage should undoubtedly be carried out.

Types of Infection—The right kidney was infected in 18 and the left in 22 patients. In 60 the infection was bilateral. Eighty-four per cent of the patients showed a bacillus infection, and 16 per cent a coccus infection. Although we have not done sufficient bacteriological work to fully identify the organisms in all of the cases, most of these coccus infections showed more involvement of the bladder and were more frequently associated with surface ulceration and hematuria. These cases also were more resistant to treatment.

Pain—It is astonishing how severe an infection of the kidney may be present without pain of sufficient severity to cause distress. The large majority of the cases complain of only bladder disturbances, and it is the absence of pain in the renal regions which formerly led to so marked a chronicity in this type of infection. Eighty-nine of the cases in this group presented bladder symptoms, leaving a small percentage of eleven in which there were no urinary disturbances. Cases of severe infection of the kidney are sometimes subject to renal pain, usually aching in character, and which may be typically renal in distribution.

In other instances the pain in the back may be associated with pain in the upper abdomen or in the region of McBurney's point on the right side, and a corresponding position on the left side. There are still other instances in which infection of the kidney may be associated only with abdominal pain, and when this pain occurs in the region of the appendix it may be extremely difficult to differentiate between acute infection of the right kidney without appendicitis, and acute infection of the right kidney in association with appendi-

* Read before the Obstetrical Section of the Los Angeles County Medical Society.

citis. In either case there is fever, leukocytosis, pain in the region of McBurney's point, and in the actual absence of appendicitis we have observed a slight degree of rigidity and a tendency toward muscle spasm.

Urine—Ninety-five per cent of the cases showed pus in the urine. Sometimes even prolonged observation would show only an occasional pus cell, in spite of the large numbers of bacteria. The absence of pus in all cases of bacterurea has led some to the belief that one of the functions of the kidney is to excrete bacteria. When ureteral catheterized specimen of urine contains bacteria, the kidney is the seat of a definite infection. Prompt smear examination immediately after catheterization are necessary, because if examination is delayed it is impossible to be positive that the infection is in the kidney. The bacteria may be the result of contamination which has been picked up in passing the ureteral catheter through an infected bladder.

Direct slide smears are of more diagnostic value than cultures because cultures are nothing more than a multiplication many times of a misleading contamination. Also it must be remembered that all bacteria do not grow on ordinary laboratory media and many observations have failed to secure satisfactory cultures, even when direct slide smears showed a heavy infection of bacteria.

Macroscopically clear urine may be heavily laden with bacteria, and no urinary examination is of value unless freshly catheterized specimen in the female and freshly voided second-glass specimen in the male are immediately centrifuged and stained. Fifty-nine per cent of the cases showed blood in the urine. Albumen was present in 65 per cent of the cases, and infection was demonstrated in all of them.

Some cases of pyelonephritis have been found associated with parenchymatous nephritis in the same patient. In some of these cases exhaustive searches for focal infection, had been made, but a bacteriologic study of the urine had been neglected. It is possible that infection had occurred in association with a typical parenchymatous nephritis; but if this is the case, infection of the kidney would seem to have played a large part in the renal destruction, for in one of the cases showing a heavy cloud of albumin, the left kidney had been virtually destroyed, and the right reduced considerably in its functional capacity. The kidney itself should be more often considered as a source of its own focal infection, if focal infection bears any great relation to nephritis.

Other Considerations—The fact that pyelonephritis may be latent and is frequently associated with gastro-intestinal disturbances has led some to the belief that pyelonephritis may not be due to fault of the kidney but to constant invasion of the kidney by bacteria as a result of some type of intestinal stasis.

This theory is supported by the frequency of bilateral infection, but infection might well occur on the second side as a result of ascending infection. It is further supported by the frequency

of gastro-intestinal disturbances in association with kidney infection, but in such diseases of the kidney as hydronephrosis, tumor, and stone unassociated with infection, it is not uncommon to find gastro-intestinal disturbances of a similar character. If kidney infection were often dependent upon gastro-intestinal stasis, local treatments of the kidney would not often prove successful, or lasting, and it may be that the persistent types of infection in which no stasis of the urine is demonstrated may depend upon constant injury to the kidney through intestinal stasis.

A good many cases of pyelonephritis are undoubtedly dependent upon stasis of the urine as a direct result of obstructions somewhere along the ureter, and dilatation of the ureter is of undoubted value in treating these particular conditions.

CONCLUSIONS

Pyelonephritis occurs more frequently in females than in males, due to pregnancy and gynecological procedures. Gynecological procedures should be preceded by the administration of urinary antiseptics, and these should be continued during convalescence.

Pyelonephritis is extremely common in childhood, is less frequent during youth, and again appears throughout life. From this it is concluded that the large majority of cases occurring in children spontaneously recover. There is an occasional case in which this does not occur and so lowers their resistance as to render them susceptible to other infections proving fatal. Children in whom pyelonephritis exists for a long period of time should be given the benefit of pelvic lavage. There is practically no difference between the right kidney and left kidney in incidence of infection.

Clinical observations of marked bladder disturbances and of infection of the urine subsequently followed by pain in the renal regions and fever have led to the conclusions that ascending infection may occur and probably often accounts for the bilateral nature of the disease.

Pyelonephritis is most often emphasized by bladder disturbances alone, but it may be associated with pain abdominal in type, and when associated with acute infection may be extremely difficult to differentiate from urinary infection associated with appendicitis. Not all cases of pyelonephritis show pus in the urine. Direct slide smears are of more value than cultures. There are infections of the urinary tract other than tuberculosis which, in the absence of urinary antiseptics, will not grow on ordinary media. It is not one of the functions of the kidney to excrete bacteria, and the finding of bacteria in kidney urine is evidence of a pathological process in that kidney. Chronic nephritis associated with infection of the kidney is not uncommon. The presence of large amounts of albumen in these cases has in some instances led to exhaustive studies of other portions of the body for foci of infection with total neglect of the kidney itself as a focus of infection.

Persistent cases of pyelonephritis in which no

stasis is present may have as their cause gastrointestinal stasis. Pyelograms should be made in cases of persistent pyelonephritis to demonstrate the absence or presence of ureteral stricture.

I wish to express my grateful appreciation of the courtesy of Dr. Arthur B. Cecil, who has so kindly made the material for this study possible.

PERSONAL OBSERVATIONS ON UNUSUAL FORMS OF ACUTE POLIO-MYELITIC PARALYSIS.*

With Remarks on Clinically Related Types of Epidemic Encephalitis and Landry's Paralysis

By WALTER F. SCHALLER, M. D., San Francisco

Wickman¹ has classified the following clinical forms of poliomyelitis:

1. The spinal poliomyelitis form.
2. The form resembling Landry's paralysis.
3. The bulbar or pontine.
4. The encephalitic.
5. The ataxic.
6. The polyneuritic (resembling neuritis).
7. The meningitic.
8. The abortive.

Weisenburg² in a study of 717 cases in the 1916 Philadelphia epidemic modified this classification as follows:

1. The spinal form.
2. The form resembling Landry's paralysis.
3. The pontine bulbar:
 - (a) Bulbar.
 - (b) Pontine.
 - (c) Pontine bulbar.
 - (d) Pontine spinal.
 - (e) Bulbar spinal.
 - (f) Pontine bulbar spinal.
4. Encephalitic.
5. Cerebellar.
6. Meningitic.
7. Abortive.

It will be seen that Weisenburg's classification differs more particularly in the subdivisions of the bulbar types and the omission of the so-called polyneuritic type. In fact, this author is convinced that the pain and tenderness in the affected limbs, which is so marked and characteristic of a certain group, is not at all of neuritic origin. He found at no time pressure over the nerve trunks producing pain. In favor of the view of the meningeal origin of these sensory disturbances is the rapid subsidence of pain following lumbar puncture. In fact, from the standpoint of therapy lumbar puncture was considered indicated and was done in every patient on admission to the hospital and was repeated as occasion arose according to meningeal symptoms and pain.

In the spinal types Weisenburg makes the point that the progression of the paralysis in both upper and lower limbs is from the proximal portions to the distal portions of the limbs. He makes the statement that there is no record of a single instance in which the paralysis started in the parts below the knee and extended upward.

In the recession of the paralysis the distal portions cleared up more rapidly than the proximal. A more rapid improvement in the upper extremities took place when contrasted with the lower extremities. A Landry type is spoken of, but is not considered to be as distinct as is commonly supposed.

Wickman classified Landry's paralysis as a form of poliomyelitis. From a study of two unpublished cases of Landry's paralysis—one in which a necropsy was done and the spinal cord and peripheral nerves studied—it is my personal opinion that it is very doubtful whether this is the case.

Charles K. Mills³ in 1910, studying an outbreak of poliomyelitis in the Lehigh Valley and Philadelphia of that year, mentions cases reported in Norway and Sweden and in this country showing lesions practically identical with those in the cord, also in the cortex and in the basal ganglia. He speaks of the so-called cerebello rubro-spinal symptomatology—coarse tremor with some paresis and rigidity; the whole somewhat like paralysis agitans, or a mixture of this disease and multiple sclerosis. Although on the lookout for this form, Dr. Mills had evidently not met with an example of it.

This brings up the question of the possible identity of epidemic infantile paralysis and epidemic encephalitis, which has been suspected because of the similarity of the histo-pathological picture. The fact that this latter disease has always been associated in epidemic form with influenza; that it is unusual for it to produce lower motor neuron paralysis and atrophies comparable to poliomyelitis; that adults are predominantly affected; that the seasonal prevalence is different; and that no corresponding increase in the number of cases of infantile paralysis occurred when the encephalitis epidemic was at its height: all these would speak against this identity.

Strauss,⁴ Loewe and Hirshfeld claim to have demonstrated a filterable virus in epidemic encephalitis, to have cultivated it and by it to have reproduced the disease in animals.

Although morphologically this organism resembles that described by Flexner and Noguchi in poliomyelitis, it acts differently in its infectiousness in different animals, namely, in monkeys and rabbits. Strauss told me personally this summer that he believes that the virus of influenza and epidemic encephalitis are the same.

Thalhimer⁵ confirms the above authors on the specificity of this organism.

Riley⁶ and others before him have discussed the spinal forms of epidemic encephalitis. Such a classification may lead to the impression that this clinical picture of encephalitis, and poliomyelitis are similar. This has not, however, been my experience. In a study of some twenty-nine personal cases of epidemic encephalitis gotten together over a year ago, and read before the annual meeting of the Pacific Railway Surgeons, no example of a frankly similar picture to acute poliomyelitic paralysis occurred. Riley describes an irritative type and a paralytic type, this latter often being an end result of the former, and included as a type largely on theoretic grounds.

* Read before the San Francisco County Medical Society Meeting of November 1, 1921.

The irritative type is evidenced either by myoclonic or fibrillary contractions.

In the last number of the Archives of Neurology and Psychiatry (November, 1921) Morris and Jacobson⁷ have written an excellent article on acute ascending myelitis of the infectious type, with necropsy findings in two cases. The literature on this type is reviewed; they do not feel that they can conclude definitely that these cases are due to infection by the poliomyelitic virus, although it is equally difficult to deny it.

It may be said, therefore, that there is definite proof lacking in the identity of acute poliomyelitis, epidemic encephalitis, and Landry's paralysis, although it still may be possible that they are different clinical expressions of the same disease. I note that in "Oxford Medicine" Peabody accepts as cause of poliomyelitis the organism of Flexner and Noguchi.

When we are dealing with cases of acute poliomyelitis the clinical forms are so variable that sometimes we are in doubt about the correctness of the diagnosis, particularly at the onset of the disease. I have recently met with two examples, both in adults, in which the first probability which occurred to my mind on seeing these patients was a transverse myelitis.

CASE REPORTS

Case I. F. G. E., male, age 21—Private Record No. 1801—Pre-paralytic onset of three days, commencing with weakness of the legs gradually increasing, and difficulty in starting flow of urine. No pain. Examination revealed a total flaccid paralysis of left lower extremity, and also of right lower extremity excepting some motion at the right ankle. A distended bladder extending almost to the umbilicus necessitated catheterization. Questionable hypesthesia below middle of thighs in both extremities. No disturbance of deep sensibility and no pain on deep pressure of muscles. A history of a penile sore, in spite of negative serological reactions, made it appear probable that this was a case of transverse myelitis on a syphilitic and endarteritic basis. Time showed the error of this view, as the paralysis remained a flaccid one; there never occurred any pathologic pyramidal tract signs; and there were no lasting sensibility disturbances. The muscles eventually showed frank atrophies and reaction of degeneration with tendency to recovery of function especially in the muscles of the right lower extremity.

Case II. B. G., male, age 34—Seen in consultation at the Southern Pacific Hospital, San Francisco, October 18, 1921. Pre-paralytic onset as follows: Eleven days before the paralysis violent pains on both sides of chest, accompanied by slight chill and a temperature of 103° F., made probable a diagnosis of pleurisy or pneumonia. Two days later the temperature fell to normal and the pain disappeared. Three days later the patient returned to his occupation and felt well with the exception of some pain in his chest on deep inspiration. Three days after return to work a return of pain, but at this time across the small of back, radiating down the anterior part of both thighs to the patellae. Pain was lancinating and intermittent and continued for three days. On the third day about 11 o'clock in the morning the patient was unable to cross his legs in bed, and this weakness progressed so that by 7 o'clock that evening he had no use of the lower extremities except to move the toes. The arms were not involved. The examination in consultation revealed

a flaccid paraplegia with no discernible involvement of sensation. There was some pain on deep pressure of the affected muscles, but more so by stretching the muscles either by passive flexion or extension, and particularly by the Kernig maneuver. There was some motion left in the toes of both feet but no motion at the hips, knees or ankles. In this case, as the foregoing, patient was obliged to be catheterized twice after the onset of paralysis. This case is of such recent occurrence that marked atrophies have not yet developed.

Another clinical type which has interested me very much is the predominant type associated with distressing and continued pain in the affected muscles. We have investigated these cases by lumbar puncture to determine whether the meningeal reaction *ran pari pasu* with the subjective sensory disturbances.

Case III. R. C., male, age 18.—Stanford Dispensary No. 94194—Pre-paralytic symptomatology of nervousness, irritability, sleeplessness and diplopia following overwork. The paralysis of the extremities began in the left arm, extended to the left lower extremity, then to the right arm, and then to the right lower extremity. Whereas, objective sensation was quite normal in the affected extremities, the patient noticed from the beginning marked sensitiveness of the muscles especially on pressure. The examination showed a flaccid quadriplegia with hypotonia, areflexia and atrophy much more marked in the proximal than the distal parts of the extremities, although the patient was paralyzed to the extent that he could not assist himself or move from the supine position in bed.

The following were the lumbar puncture findings in this case under the following dates:

	Pressure	Leucocytes	Globulins
April 22, 1921.....	250 mm.	18.1 per cmm.	increased
April 26, 1921.....	?	33.7	" "
May 2, 1921.....	180 mm.	10.9	" "
May 11, 1921.....	85 mm.	23.1	" "
May 18, 1921.....	150 mm.	10.9	" "
May 24, 1921.....	18.6	" "
June 2, 1921.....	145 mm.	28.1	" "
June 9, 1921.....	126.8	" "
June 23, 1921.....	140 mm.	10.6	" "
July 5, 1921.....	70 mm.	8.1	" "

Following the puncture of May 24, June 1, and June 9, mercurialized autogenous serum was injected in order to stimulate the leptomeninges to greater effort to overcome the apparent subacute infection of the subarachnoid spaces. When the patient left the hospital on July the 12th the pain in the muscles although less was still present.

Case IV. A. N., female, age 11—Stanford Dispensary No. 97459—Entered hospital with complaint of paralysis of both lower extremities from the hips down. Duration about two weeks. Prodromal symptoms of "growing pains" in the legs, especially in the calves, and some headaches; increasing pain in the legs and in the lumbar region, with chilly sensations. Two days after this onset fell in attempting to walk and afterwards inability to use the lower extremities. Immediately prior to the paralysis, sensation of numbness and tingling in the feet. Examination: Both lower limbs held flexed on the abdomen, and legs flexed on the thighs, with some motion in the right toes. Exquisite tenderness of muscles on manipulation; areflexia, hypotonicity. Sensation was unaffected. The examination was made exceedingly difficult on account of the great muscle tenderness. Active motion was very difficult to determine on this account, although the flexion posture of the limbs suggested that more active motion was possible than could be elicited.

A lumbar puncture on this patient done two days after admission showed a considerable in-

crease in the globulins and a leucocyte count of 11.8. On account of the faulty position of the lower extremities in flexion and the possibility of contractures, the orthopedic surgeons were called in consultation. On September the 1st, or about three weeks after patient was admitted, a lumbar puncture was done under great difficulty, the fluid being contaminated by an admixture of blood. There were but 10.5 leucocytes per cu. m. m. with some increase in the globulin, which might have been accounted for by the normal blood content of white cells. This count was, however, not satisfactory. This patient left the hospital after the last puncture and has not since been heard from.

Case V. S. R., male, age $3\frac{1}{2}$ —Stanford Dispensary No. 98753—Pre-paralytic symptoms lasting three days, commencing with headache and a temperature of 102° F. The fever fell on the second day, but the child was languid and rather stuporous. The third day he was unable to stand because of paralysis of the right leg. This was on September the 20th. Examination showed flaccid paralysis of the right leg in extension, the leg being externally rotated and the foot everted. The tendon reflexes of this extremity were not elicited. No evident objective sensory disturbances. The left leg showed no paralysis. A very striking feature of this case was pain and tenderness on passive motion or pressure of the affected leg muscles, and also of the left leg muscles, but to a considerably less extent. The spinal fluid examinations were as follows:

as follows.		Leucocytes	Globulin
September 23, 1921.....	32		positive
September 27, 1921.....	11.2		"
October 12, 1921.....	48		"
October 29, 1921.....	3.1		negative

When last seen (October the 29th) the power of flexion and extension of the right thigh was possible, but no motion was present at the knee or in the toes. The tenderness was decreasing but still present.

It occurred to us to seek some references regarding the spinal fluid content following acute poliomyelitic paralysis. Whereas Draper gives no data concerning the fluid after the first few days, Ruhrah and Mayer state that "cells disappear rapidly so that after two weeks the count is either normal or nearly so."

This is probably the case in most instances, but in our series the persistence of the fluid reactions most probably indicated a meningeal origin of pain in the third and fifth cases, the former showing an increase in the cells for more than two months, and the third not clearing until one month. Unfortunately, the most typical case of pain, or the second case, we were not able to thoroughly study from the standpoint of meningeal reactions.

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- (909 Hyde Street.)

STANFORD COLLOQUIA AT THE SAN FRANCISCO HOSPITAL

Surgical—(By Dr. Sterling Bunnell)—Our first patient is a middle-aged Mexican woman, with extensive tubercular enlargement of the cervical glands of all of the triangles in the left side of the neck. There is an especial enlarged one, probably with abscess, under the upper part of the sternocleidomastoid muscle. She noticed enlarged glands here for six years, though the greatest enlargement has taken place in the last month; this probably from abscess formation. Pathology of this degree is beyond cure by X-ray. I feel that X-ray and hygiene is the best treatment for beginning tubercular adenitis.

Surgery of this condition has gained ill repute because often merely the enlarged glands, and not the gland bearing tissue, has been removed from the neck. Considering this, it is not at all surprising that recurrent cervical enlargements are so frequent after operative removal. It is my conviction that the proper way to remove the glands and gland bearing tissue is en bloc, just as we do for carcinoma. It has been my experience that whenever the whole tubercular gland bearing mass has been removed in one piece, without tearing the tissue and spreading the germs about, that that patient has been cured, providing that the tonsils are removed and that there is no other tubercular focus. In such cases I have never seen local recurrence. A block dissection was then done and because of the magnitude of the operation it was followed by a transfusion of 900 cc. of blood. This reduced the pulse from 140 to 90.

The next patient is a woman forty years of age and very fat, who has had typical attacks of gall stones for six years. The present attack has lasted a week and was accompanied by a temperature of 101° . About the lower part of the abdomen is a huge roll of fat, which suggests the necessity for a lipectomy, but peculiarly enough the layer of free peritoneal fat is as scanty as in a thin person. This, together with the finding of an infantile uterus, suggests hypopituitarism. The gallbladder is somewhat enlarged and congested, slightly thicker walled and more gray than normally and adherent to the neighboring viscera. The surface of the liver in the immediate vicinity shows a ribbing of scar tissue and along the cystic duct and common duct can be felt several enlarged glands. The pancreas is slightly harder than normal. Many stones can be felt in the gallbladder. In this case we have a full set of signs of cholecystitis. Quite often, however, we have a good history of cholecystitis and no gross signs in the gallbladder, except perhaps the enlargement of the telltale gland along the cystic duct. In such a case it is best to be guided by the history and remove the gallbladder. . . .

Our next case is that of an injury to the knee joint, caused by sitting upon it with the leg in the abducted position. There is local tenderness over the internal lateral ligament and pain is produced when the leg is abducted. There is also a greater degree of lateral motion in the injured leg compared with her normal leg. It

is, therefore, concluded that there has been a rupture of some of the fibers of the internal lateral ligament. This ligament is uncovered through a semilunar incision and a longitudinal incision is made through it. Through a small hole in the capsule of the joint the internal articular cartilage is explored and found to be normal. For a distance of about two centimeters the fibers of the internal lateral ligament are seen to have been torn. A strip of fascia is taken from the fascia lata of the same leg and transplanted under the internal lateral ligament, contacting with the tibia below and the femur above and the incisions are repaired. The free fascial graft, together with the resulting reaction in the surrounding ligamentous tissues, will result in so re-enforcing the internal lateral ligament as to effect a cure. This principle can be applied to a chronically spraining ankle. Fascia and ligaments are the safest tissues to graft and will live even when but one surface is contacted with vascular tissue.

Obstetrical and Gynecological—(By F. R. Girard)—Ovarian transplants: The patient before us is a gravida IV para II, thirty years old. Menstruation of the normal thirty-day type of four to five days' duration began at 14. Since an abortion, six years ago, menstruation has been every three to five weeks, accompanied by severe pain in both lower quadrants, down thighs and associated with backache. Vaginal examination shows no evidence of inflammatory disease; a small cervix with bilateral lacerations. The uterus normal in size, position, outline and consistency, but motion is limited by adherent adnexa to lateral pelvic walls. Operation shows both adnexa buried in dense adhesions to lateral walls and floor of the pelvis; left adnexa also adherent to sigmoid; posterior surface of cervix adherent to sigmoid; body of uterus normal; bilateral salpingo-oophorectomy; blood supply of both ovaries badly damaged during enucleation and much raw surface on ovaries; bilateral hydrosalpinx.

Comment: A healthy uterus in a thirty-year-old patient makes this an ideal case for ovarian auto-transplantation. It is evident that these ovaries must be removed, and by removing the cystic areas from both ovaries and also the markedly thickened and sclerotic capsule we can place two grafts at the upper and lower angles of the incision in pockets prepared on top of the anterior rectus sheath.

Question—What are the chances of the grafts sloughing out?

Answer—By using multiple small grafts a much larger surface is obtained for establishment of new blood supply and by being careful to use ovaries which are not involved in acute inflammatory processes I have been able to secure grafts which have lived and functionated in all of the twenty cases of my experience.

Question—How long do you expect it to take before menstruation is re-established?

Answer—That varies with different patients. The shortest time from operation to first menstrual flow was five weeks and the longest time

was six and a half months. Regarding length of time that patients menstruate after auto-grafting, my personal experience has been that cases grafted approximately two and a half years ago are still menstruating regularly and in a satisfactory manner. Professor Tuffier of Paris has, from a large series of cases, determined that the menstrual life after auto-grafts is approximately from two and a half to three and a half years. It is most gratifying to see the freedom from the distressing nervous, atrophic, nutritive and vaso-motor disturbances that these patients have when auto-transplantation has been done and menstruation preserved.

Medical Fees Under the Workmen's Compensation Act—It is believed that concrete examples of rulings upon medical fees may be of use to physicians in more ways than one. The following ruling in an actual case is furnished by Morton R. Gibbons, M. D., Medical Director, Industrial Accident Commission:

"My understanding is that your services involved a journey of 106 miles, being 53 miles one way; that the injury for which you attended the injured employe was a compound jagged fracture of the humerus three inches below the head, dislocation of the head of the humerus, and twelve small lacerations and four large lacerations, together with dangerous hemorrhage from many lacerated blood vessels. Your services included reduction of the fracture under anaesthesia and reduction of the dislocation; also the repair of twelve small wounds and four large wounds above mentioned; also ligation of several bleeding vessels. In addition to this there was the necessary treatment of shock, and application of retentive appliances.

According to the Fee Schedule you are entitled to fees as follows:

For reduction of the fracture of the humerus, compound	\$ 60.00
Reduction of dislocation of the head of the humerus with complications	20.00
Repair of twelve small wounds	20.00
(N. B.—In multiple small wounds it is not logical to charge full fees for each.)	
Repair of four large wounds	20.00
(N. B.—It is noted that several of these wounds are of great extent, more than contemplated in the minimum of the Fee Schedule.)	
Mileage, 53 miles one way	39.75
For sutures, medicines and materials	2.70

This makes a total of.....\$162.45

A large latitude in judgment must be left to the surgeon who sees the case in emergency. If in his judgment, knowing his own facilities, his own skill and experience, and most of all, the needs of the patient, it would be better to treat him extensively without delay, he should certainly do so. Failure to perform the proper service at the proper time when it is possible to do so, entails danger of malpractice suit against the doctor, no matter whose rule he may be following or what employer's criticism he may incur later.

From the information which you give me and what I gather from your correspondence, it is my opinion that you did right in treating your injured man as you did."

The Hotel Casa Del Mar, near Venice, California, will be opened in a few days as a hospital of about 100 beds. William G. Lutz is superintendent.

The William H. Lewis Memorial Hospital has been opened at Atascadero, California. The hospital has 30 beds, including 12 private rooms. Charles A. Love, M. D., is director of the institution.

EDITORIALS

THE NOMENCLATURE OF DISEASES OF BONES AND JOINTS

The human mind, on recognizing an object, endeavors to put a name to it, and this is quite necessary in order that description and discussion may take place. Unfortunately, the mind has also a tendency to delude itself with the thought that investigation and exact knowledge may be avoided, provided an object be endowed with a name sufficiently scientific in its sound and all-embracing in its scope. Nomenclature, then, instead of being a help may become a hindrance, and the investigator may find himself hopelessly tangled in a net of ambiguous terms, which prevent him from making his meaning clear.

Diseases of bones and of joints well illustrate this point, probably on account of the obscure pathology of some of them. As the pathology of tuberculosis has become better understood, such terms as "caries sicca," "white swelling," and "scrofula" have slowly disappeared, but the nomenclature of the non-tuberculous arthritides is still so confusing that a reader is often quite unable to distinguish the meaning of the author he consults. What is arthritis deformans, osteoarthritis, rheumatoid arthritis, destructive arthritis, proliferative arthritis, degenerative arthritis, hypertrophic arthritis, atrophic arthritis, villous arthritis, metabolic arthritis? What is chronic rheumatism? The originator of each of these terms probably thought he knew what he meant by it, but how is anyone to guess at his meaning? Or how ascertain if he had any idea of the subject he was discussing? Osteoarthritis is, of course, an inflammation involving bone and joint, but its sponsor evidently does not wish us to attach that meaning to the term. Metabolic arthritis means everything and nothing. Villous arthritis is an arthritis characterized by the production of villi in the synovial membrane. The formation of villi is the reaction of the synovial membrane to any irritant, and is present in all forms of arthritis.

What is ankylosis? Let us ask a dozen medical men and tabulate their answers. Then let us attempt to define the various kinds of ankylosis, and again we are at sea.

A joint mouse has in our minds a fairly definite place, but to express our exact meaning is no easy task. The true joint mouse, as we well know, is found almost exclusively in the medial condyle of the adolescent femur. Some study is necessary to find out the exact reason for this, but the Germans avoided the difficulty by predicating a special disease for the condition and attaching to it the mouth-filling and awe-inspiring term, "osteochondritis dissecans." Accept the disease and the name, and no further investigation is necessary.

A very rare condition in the new-born is characterized by such a brittleness of the bones that they fracture easily and often. Call it "fragilitas ossium," and let it go at that. If we are still

unsatisfied, change the Latin to Greek, and substitute "osteopsathyrosis idiopathica." If uttered glibly enough, this term will defy pursuit and will serve to quiet almost any class of students.

In 1903 Osgood and Schlatter discovered independently and almost simultaneously a peculiar condition of the tibial tubercle in the adolescent. In spite of the disadvantages of calling a disease after the name of its discoverer, until the nature of this affection is definitely determined, most of us are fain to name it Osgood-Schlatter disease. But lo! Certain ambitious observers think, after seeing two or three cases, that they have solved the problem and attempt to settle the matter by clapping on a name. According to all the rules of the game, Ebbinghaus must be right, for his title is almost as imposing as all the rest—"epiphysitis tibiae dissecans traumatica adolescentium." Poulsen is a poor second with "periostitis tuberositas tibiae," while Leclerc, Blencke and Kennedy trail far behind with "apophysitis tibiae" and "acute epiphysitis."

Many examples might be multiplied to show the need of intensive study of bones and joints, in order to clear up the confusion. The pathologist and the clinician must work hand in hand, or better yet, one man must combine pathology with clinical medicine and surgery. As a preliminary to his study, let him decide on a definition of the active constituent of all bones—the marrow.

STOCK HOSPITAL PROPAGANDA

A second word of caution is issued upon this subject because, since our former editorial, some physicians have invested in hospital propositions that are bound to be failures. Physicians should require that new projects have the endorsement of their organizations before taking part in them.

Many of the various new activities that are springing up all over the State, and all over the country for that matter, are sound and deserve the fullest co-operation and support both in service and money. Other proposed hospitals, sanitariums, clinics, associations and what not are impracticable, visionary, unsound or dishonest. The records of many of the good, as well as the unsound propositions, are in the offices of your organizations. Investigate before you endorse any proposition with your moral support, service or money.

ARE YOU GOING TO ST. LOUIS?

Members of our Society, who intend to go to the A. M. A. meeting at St. Louis, from May 22 to 25, are requested to write to the Secretary of the Medical Society of the State of California regarding the matter of transportation and accommodations.

If 125 or more physicians wish to go from Yosemite to St. Louis we will be able to secure special accommodations and other attractions for our members. In order to have a census to present to the railroad company, it is urgently requested that you inform the State Secretary without delay of your intentions.

MORE ABOUT "ENDOCRINE GLANDS"

Doctor, have you read the book by Louis Ber-
man, M. D., entitled "The Glands Regulating
Personality: A Study of the Glands of Internal
Secretion in Relation to the Types of Human
Nature"? Have you read the extensive reviews
of this book in the various magazines and news-
papers? You should read them carefully and
thoughtfully because thousands of people are read-
ing them and you should be prepared to deal
intelligently with those of your own patients who
will need your services after such reading.

This book is a remarkably clever and attractive
blending of known facts about an important and
only partially understood subject with logical,
illogical and visionary theories in such a way that
the average reader accepts the whole thing as a
fact.

Multitudes of readers will act upon the "knowl-
edge" they obtain from this book and from its
extensive reviews to "prolong" their lives, change
their "personalities," restore their "lost vigor" or
cure their diseases by purchasing and using these
dangerous preparations now everywhere available,
or by becoming patrons of some of the numerous
advertising fake healers who already are reaping
harvests from this field.

Publications about such subjects with more
positive differentiation between fact and fancy are
useful to physicians and other serious students, but
they would have no great "news" value and no
"publicity" or "propaganda" value under these
circumstances.

Stories like the book in question are being issued
about other unsolved questions of pathology, and
no doubt more will be forthcoming. They do a
great deal of harm of several varieties and little,
if any, good in any way.

Of course, there are problems—great problems—
bound up in the physiology, pathology, diagnosis
and treatment of disturbances of the glands of
internal secretion. There is and has been for many
years an ever advancing chain of new knowledge
being produced from many sources tending toward
solution of the problems. All that is safe of this
new knowledge is taken advantage of by physicians
in the diagnosis and treatment of disease, and such
progress, research, and practice should and will
continue.

However, serious thinkers regret the introduction
of literature which, whatever the intentions of the
authors, tends to deceive the general public and
lends itself so readily to the uses of propagandists
and even unscrupulous persons for commercial
purposes. This to the detriment both of legitimate
science and of the public health.

OVERSPECIALIZATION IN PUBLIC HEALTH WORK

We are hearing and reading a lot about over-
specialization in the practice of medicine and the
importance of this development in the constantly
increasing cost of medicine to the public.

We are not yet hearing so much about the vastly
more important problem of the enormous cost of

public health and public welfare and the more
certain element of overspecialization in producing
the excessive cost.

The generally recognized specialties in diagnosis
and treatment of disease are less than ten. They
are all in the hands of physicians. The specialties
in "prevention" as now practiced and paid for
range from twenty or more in rural communities
to hundreds in some cities. Some of these are
the legitimate medical and government agencies
usually operated by physicians and other health
officers of experience.

The array of so-called voluntary organizations
is bewildering in their number, in their activities,
in the changing and often doubtful quality of
leadership and in the amount of money they spend.

The contributing public is becoming curious, and
one of these days someone is going to take the
trouble to find out how much money is collected,
donated, levied by taxes and otherwise provided
by the public for "welfare and health work";
they will show when, where and what for this
money was used, and when that is done and pub-
lished there is going to be a slump in organizations
devoted to "uplift."

DANGERS IN EDUCATION

The dangers of government bureaucracy, poli-
tics and over-organization in education are empha-
sized in the annual report of the President of
Columbia University just issued. We read:

"One of the most noteworthy of recent develop-
ments in American life is the zeal with which
machinery is designed and built ostensibly to serve
various public interests and undertakings, but in
reality to control them. Perhaps in no other way
is the decline of faith in liberty so clearly
marked. . . .

"So far as education is concerned, this has been
over-organized for a long time past. Too many
persons are engaged in supervising, in inspecting
and in recording the work of other persons. There
is too much machinery, and in consequence a
steady temptation to lay more stress upon the form
of education than upon its content. Statistics dis-
place scholarship. . . .

"It is now proposed to bureaucratize and to bring
into uniformity the educational system of the whole
United States, while making the most solemn
assurance that nothing of the kind is intended. . . .
If tax-supported education be first encouraged and
inspected, and then little by little completely con-
trolled, by central authority, European experience
shows precisely what will happen. . . .

"The true path of advance in education is to be
found in the direction of keeping the people's
schools closely in touch with the people them-
selves. Bureaucrats and experts will speedily take
the life out of even the best schools and reduce
them to dried and mounted specimens of pedagogic
fatuity. Unless the school is both the work and
the pride of the community which it serves, it is
nothing. . . .

"It is fortunate that Columbia University, a public
institution, was founded and is supported by the
State in the field of liberty, and that it is free to
carry on its work beyond the reach of the deaden-
ing hand of government."

There is more in this report that every person
interested in education should read.

STATE SOCIETY

ABSTRACTS FROM THE MINUTES OF THE ONE HUNDRED AND TWENTY-NINTH MEETING OF THE COUNCIL OF THE STATE MEDICAL SOCIETY.

(Held in Los Angeles, January 28, 1922.)

Industrial Accident Work—The report of the State Society's committee on Industrial Accident Insurance Work was considered by the Publicity Bureau, where a few minor changes in the report were suggested, and the matter in this shape came before the Council. Upon motion of Parkinson, on behalf of the committee, it was unanimously

RESOLVED, That the amended report, containing the modifications and changes suggested by the Publicity Bureau, stand on the minutes of the Council as the original report of the committee, this report being as follows:

REPORT OF COMMITTEE ON INDUSTRIAL ACCIDENT INSURANCE

Adoption of Blanks and Fee Schedule—The committee requests that it be authorized to hold conferences with insurance companies and with individual representatives of same, to secure the general adoption of the Society's blanks, which automatically adopts the fee schedule.

Increase in Fees—The committee believes conditions at present are inopportune for seeking an increase in the present fee schedule and recommends that action be deferred until prices have been stabilized and the business outlook improves.

Enlargement of the Panel—In line with its former suggestions, the committee believes steps should at once be taken to enlarge the panel. It recognizes that, while many physicians believe the injured employe should have the right to choose his medical attendant, this right cannot be conceded by those legally responsible for his care and legally liable for every expense attached thereto. At the same time there is no reason why men competent to do surgical work and to make the necessary reports should not be permitted to treat all cases referred to them by employers.

The question of professional competency is not based upon personal preference, nor can it with certainty be determined by a layman nor, indeed, by an insurance company not employing a medical director. The medical profession is the only judge of the qualifications of its members and their efficiency in the various specialties.

The committee therefore recommends that various County Societies be requested to assume this responsibility toward the State and that each Society be instructed to certify to the secretary of the State Society a list of its members competent by education, training, experience and licensure, to do the industrial surgery required in industrial accident insurance, willing to undertake this work and willing to make prompt and accurate reports of all cases. If a physician claims to be practicing any specialty exclusively, his specialty should be indicated, with his experience and qualifications as above mentioned.

It is recommended that the County Societies assume the responsibility not only of providing the State secretary with this original list, but of providing at least a monthly list showing changes in this panel.

No attempt should be made to indicate the manner in which any society shall reach its conclusions,

nor is any machinery suggested for determining the result. It must, however, be understood that every society certifying a panel will stand sponsor for the accuracy of the statements given as to the men's education, training and other qualifications to do insurance work, and agrees to demand from them and extend to them the customary professional support and courtesies.

The committee believes that if this course be adopted by the County Societies it will result in better treatment for beneficiaries and a more equitable distribution of industrial medicine practice, and that carriers when assured of these facts will accept the plan.

JAMES H. PARKINSON,
JOHN H. GRAVES,
GAYLE G. MOSELEY.

Question of Laymen Contracting for Accident Insurance Work and Hiring Physicians to Do It—This matter being before the Council, it was unanimously resolved that the matter be investigated by the Publicity Bureau and reported upon at a subsequent meeting.

Program for 1922 Meeting—The secretary discussed the progress being made by the Program Committee and asked for approval or instruction upon a number of points, the only one requiring action being to the effect that the report of the Committee on Industrial Accident Insurance be presented at one of the general sessions by the chairman, James H. Parkinson, instead of before the House of Delegates only, as usual.

Action by the Council—Upon motion regularly moved and seconded, it was

RESOLVED, That the report be read to one of the general sessions, and that the House of Delegates be requested to recognize this as the official presentation of the report.

Rebates and Commissions—Communications in the hands of the secretary suggested that the Council reiterate its stand in interpretation of the ethics upon the problem. The following resolution was unanimously passed:

RESOLVED, That the Council believes that any agreements or understandings between members of this Society and pharmacists, whereby money or any other valuable consideration is paid to physicians in connection with their prescriptions, is unethical and derogatory to the medical profession. Further, that the writing of prescriptions by physicians on blanks furnished by druggists or bearing the names of druggists should be discouraged as open to misconception.

Convention Number of the State Journal—The Council approved the policy of making the May number of the State Journal the "Convention Number" and including the program therein instead of printing a separate program. They furthermore approved as a matter of policy the issuing of a daily Convention Bulletin under such conditions as may be brought about by the chairman of the Publicity Committee and the executive officers of the association.

Rules of Policy Regarding Publications in the Journal—The Publicity Bureau presented a number of rules upon this point. These rules were unanimously approved by the Council and are as follows:

1. The Journal will not publish original manuscripts except as presented by members of the State Society; provided, in the case of invited guests to the State Society or one of its constituent society meetings or invited guests to some special conference or meeting, they may be accepted at the discretion of the editor.

2. Except in special instances approved by the Publicity Bureau, manuscripts will not be accepted for publication in the Journal until they have been presented at a State Society meeting or a meeting of one of its constituent societies.

3. Manuscripts consisting essentially in individual case reports, unless these reports deal with extremely rare or unusual conditions, are not considered as being suitable for the Journal.

4. The editorial staff, as is usual in publications, shall reserve the right to modify, condense, extend or reject any manuscript from any person.

5. As a matter of policy, which may be changed only in special instances, the Journal will not accept articles of more than 5000 words and will give preference to those of from 2000 to 4000 words.

6. The Journal being intended to represent the entire membership of the State Society, the editor will, as far as feasible, give preference to material for publication that promises to be of the greatest good to all members of the profession.

7. In the selection and rejection of manuscript the editor and the Publicity Bureau will be guided in their action by the merit of the paper and to a limited degree by expediency. No discrimination will be made between the manuscript read at the State Society meeting and one read at any constituent society meeting. The determining point in both instances shall be the merit of the paper, and neither the Publicity Bureau nor the editor is obligated to publish any manuscript simply because it has been presented to either the State meeting or any other medical meeting.

8. The following information and rulings regarding articles for publication in the Journal are adopted with slight modifications from the A. M. A. "Style Book." This pamphlet of sixty-six pages, and which costs 25 cents, is a necessity to any medical author, and it is urgently recommended that physicians who read papers before medical societies or who write for publication secure and use this pamphlet:

Acceptable Paper—In order to be acceptable for the Journal, a paper must either (1) contain and establish positively new facts, modes of practice or principles of real value; (2) embody the results of well-advised, original researches, or (3) present so complete a review of the facts concerning any particular subject as to enable the writer to deduce therefrom legitimate, important conclusions. Our medical literature is loaded down with articles which do not come up to any of these specifications.

The Spoken and the Written Word—The requirements for a paper to be read before fifty or a hundred physicians are necessarily different from those for a paper to be published in a journal in which it may be read by thousands. Hearers will listen to a lengthy paper, even though it be rambling and discursive; readers of the same paper will impatiently turn the pages to the next article. Anyone can write a long paper, but presentation of facts concisely marks the experienced, careful writer. Every writer should realize this fact: the longer the paper, the fewer the readers.

Simplicity—Avoid (1) unnecessary, irrelevant or second-hand information; (2) needless references to literature; (3) extensive quotation; (4) elaborate language.

Carefulness—Hasty, careless composition is inexcusable.

A suitable title, suggestive subheads, a clear summary, and cogent conclusions represent the framework of a well-constructed paper.

The Right Title—Titles should be explicit and descriptive. They should be brief and definite.

Summary and Conclusions—The summary—the brief abstract of the article—may appear as an introduction or at the close; the conclusions—the deductions drawn from the cases, experiments or other facts set forth—appear always at the close. The value of the summary and conclusions is less appreciated by the average writer than by the average reader. The busy physician looks at the title to see if the subject interests him, glances at the subheads to see the phases considered, and then turns to the summary to get the gist of the article. The summary and conclusions will be reproduced by journals which otherwise would not take the trouble to abstract the article, thus presenting it to a larger circle of readers.

Negative Findings—Space should not be devoted to unimportant findings, or those which have no bearing on the subject under consideration. Negative findings are of value in few instances.

Exclusive Publication—Articles are accepted for publication on condition that they are contributed solely to this Journal.

Neatness—Illegibility, close spacing or other marked defects in the preparation of a manuscript, as well as errors in spelling, grammar or diction, give the impression that the research or observation embodied in the article is equally slipshod and inaccurate, and may turn the scale against its acceptance by the Journal.

Illustrations must illustrate; they should be clear, distinct pictures. To show instruments, apparatus, diagrams of operative technic, etc., drawings with pen and black ink on hard white paper are usually preferable to photographs.

Roentgenograms—Unless exceptionally clear and distinct, these are unsatisfactory. A roentgenogram which must be studied with much care in the original in order to find the significant points will probably show no details at all in the reproduction. When it is possible to use a diagram instead, this is frequently more graphic and hence more acceptable.

Character of Reproductions—The illustrations found in the Journal are known as "halftones" and "zinc etchings." A halftone can be made from any copy furnished, whether it is a photograph, a washdrawing or a linedrawing. Halftones are used almost exclusively in reproducing photographs and washdrawings. Zinc etchings are made from linedrawings. A zinc etching cannot be made from a photograph or from a washdrawing. Halftones require a "supercalendered" or "coated" paper; zinc etchings reproduce satisfactorily on soft or "machine-finished" paper.

Proof—Unless otherwise arranged in advance, proof of original articles is submitted to the author before publication.

SUMMARY

Plan your paper before you write it.

Make your title descriptive but brief.

Use subheads.

Number all pages consecutively.

Put your name on your manuscript and on each illustration.

Be brief.

Write in a simple, careful, grammatical style.

Delete all non-essential words, phrases, sentences and paragraphs.

Provide a summary if your article is long; give your conclusions if any were made as a result of your observations.

Verify the spelling of technical and unfamiliar words, and of all proper names.

Don't call the patient a case.

Don't copy a report of a case from the clinical record sheet. Tell the essential parts of the story in narrative style.

Send the original, not the carbon copy, to the publisher.

Fold, do not roll, manuscripts.

Manuscripts should be typewritten, double-spaced, on one side of the paper only.

Illustrations must illustrate.

Do not send negatives or glass slides. Send prints on glossy paper.

Number all illustrations consecutively.

Provide a legend for each illustration.

Write legends consecutively on a separate sheet of paper at the end of your manuscript.

Patient's consent must be secured to the reproduction of photographs.

Correct and return proof promptly.

Verify all facts and be careful to omit anything of a libelous nature, both in the written word and in the illustrations.

Junior Medical Societies for Medical Students—

The question of forming Junior Medical Societies from among the members of the different medical schools of the State was discussed. The advantages of having these students operate their own medical society under the same constitution and by-laws that a regular medical society is operated under, insofar as this is feasible, were discussed, and it was felt that this should be of advantage to students in preparing them to take up the broader duties of citizenship after they have received their degrees. It is understood, of course, that such societies would have no authority whatever to take action binding on the medical profession, nor would they have power to represent the medical profession. It was suggested that there might be one unit society for each of the three medical schools in the State, made up exclusively of its student body, and that these societies recognize the advisory or censorship control of the Council of the State Medical Society.

Upon motion regularly made and seconded, it was resolved, that this matter be referred to the medical schools of the State of California, and that, if they approve as a matter of policy, the Council approve the general policy laid down and that the matter be referred to the Publicity Bureau with instructions to formulate rules and regulations.

Accredited Agencies and Other Accredited Representatives for the Journal—Applications to become accredited agencies for selling individual copies of the Journal and for securing subscriptions upon a commission basis being before the Publicity Bureau, it was voted by the Publicity Bureau to recommend to the Council that they approve a policy of establishing accredited agencies and recognizing accredited representatives for the Journal, the number of agencies and the conditions under which they work to be approved by the Publicity Bureau.

Action by the Council—Resolved, That the agencies should be established, the price to be charged them to be fixed by the Publicity Bureau.

Biographical Data on Members of Our Association—The question of obtaining biographical data of our members was brought up for discussion. It was recommended that in sending out the official membership cards to individual members, mailing facilities be taken advantage of by enclosing with this membership card a letter (form submitted) inviting our members to furnish biographical data for the files of the State office.

RESOLVED, That this recommendation be approved and the secretary be instructed to have a supply of these form letters printed.

New Licentiates in Medicine in California—The question was discussed of greeting new licentiates in California by sending each one a letter from the State office (for ms submitted) and asking them for biographical data.

RESOLVED, That the form letter be approved and the secretary instructed to have a supply printed, to be sent to all who are eligible for membership as soon as notice is received from the Board of Medical Examiners that they have been licensed in California.

Superintendent of Publications—Realizing the constantly increasing importance of the mechanical and typographical features of our State Journal and other publications, and in consideration of the splendid willingness of Mr. William H. Barry of The James H. Barry Company to aid and assist the Society in all of its work, upon motion it was

RESOLVED, That Mr. William H. Barry be appointed "Superintendent of Publications," his name to be carried on the Journal with the other members of the editorial staff; this appointment to be subject to control by the Publicity Bureau of all conditions and problems arising out of this arrangement, and to be without salary.

Reassignment of Editorial Pages in the Journal—The question of reassignment of editorial pages to the center of the Journal instead of the first pages as at present, was discussed. As it was felt that this would comply with the general usage in publications and as it would also aid materially in the mechanical work of the Journal, it was

RESOLVED, That the editorial pages should be assigned to the center of the Journal and the scientific articles should comprise the first pages.

Medical Advisory Committee—The secretary presented a circular letter from a "Medical Advisory Committee," Dr. F. H. McMechan, secretary, Avon Lake, Ohio. Upon motion it was

RESOLVED, That the Council lay this matter on the table and advise every county medical society in the State to do the same thing.

Question of Instructing Delegates to the American Medical Association—After discussion and upon motion regularly made and seconded, it was voted that the following resolution be introduced by the Council to the House of Delegates at the next annual meeting:

RESOLVED, By the House of Delegates of the Medical Society of the State of California, That it is the policy of this Society to instruct by resolution, either of the House of Delegates or of the Council, the delegates of this Society to the American Medical Association, on all matters of national concern upon which this Society either has or desires to institute a definite policy, or which in the opinion either of the Council or the House of Delegates peculiarly affects this Society.

Assessment on Indemnity Defense Fund Members—The fact was brought up that it will be necessary for the Council to take definite action in levying the assessment on all old members of the Indemnity Defense Fund in the sum of \$5 for the year 1922 and for each year thereafter until otherwise ordered; provided, that the admission fee for new members shall remain at \$30, in accordance with the authority conferred upon the Council by the House of Delegates at the 1921 meeting. Upon motion regularly moved and seconded, it was

RESOLVED, That the recommendation of our attorney that this matter be held over for consideration at the Yosemite meeting, be adopted.

Local Transportation in Yosemite—It was reported by the Publicity Bureau that the Yosemite Transportation Company has adequate facilities for

local transportation, but some means must be provided to pay the expenses of this transportation during the State meeting. The following methods were suggested: Shall the "street car" fare be a charge to all persons or only to those who do not have badges, or shall the Society in some other way arrange for these expenses, so that all persons may ride as they please without charge? After discussion and upon motion, it was

RESOLVED, That individuals riding shall pay their own fares.

Improved Service by State Society in the Problem of Industrial Medicine—All members of the Society realize the difficulties connected with the work under the Industrial Accident law; all members realize the necessity for the State Society's taking some responsibility toward great efficiency and harmony in the carrying out of this law. It is realized that the present finances and office force of the State Society will not permit of such necessary expansion. After due consideration, on motion regularly moved and seconded, it was

RESOLVED, That the secretary be empowered to employ additional help along the lines suggested by the attorney and himself, so that this industrial accident work may be properly co-ordinated with the other work of the Society.

Question of Responsibility for Section Programs

—The secretary raised the question as to who is responsible for section programs. It was stated that in the opinion of the State Program Committee general programs should be filled by invitation from the Program Committee, and section officers should be, as far as possible, responsible for their own section programs, the State Program Committee assigning to each section the number and length of time of periods and the place of meeting of each section. Upon motion it was

RESOLVED, That, except for the fixing of the number, time, places and duration of section meetings, which is the duty of the General Program Committee, the responsibility for section programs is in the hands of section officers, and that the details of section programs are only supervisory as far as the secretary is concerned.

Membership in Local and State Societies as to Licentiate Requirements of the State—The constitution and by-laws as they now stand provide that only doctors of medicine from acceptable medical schools, who are licensed to practice medicine and surgery in the State of California, are eligible for active membership in county and State medical societies. This works a definite hardship in certain specific instances of highly trained men, usually engaged full time in some of the non-clinical branches of medicine, the detriment being equally shared by the Society. Because of the inadvisability of suggesting changes to the Medical Practice Act, it is recommended that the Council introduce at the next House of Delegates the following resolution, as an amendment to Article VII, Section 5, of the By-Laws:

RESOLVED, That the Council of the State Society be authorized to make exception to the existing State license requirement for active membership in local and State societies in specific instances and under such conditions as seem to them sufficient.

Rules Regarding Papers and Discussions at the State Meeting—It was voted by the Publicity Bureau that the following rules be submitted to the Council, with the recommendation Do Pass:

1. The maximum time that may be consumed by any paper is fifteen minutes, provided that not to exceed ten minutes latitude may be allowed invited guests at the discretion of the presiding chairman.

2. Motions from the floor to extend the time of an author may not be entertained by the presiding officer.

3. The maximum time permitted any individual discussant on any paper is four minutes. This also applies to the author in closing his discussion. No discussant may speak more than once upon the same subject.

4. A copy of each and every paper presented at the State meeting must be in the hands of the chairman or secretary of the section or in the hands of the general secretary before the paper is presented.

5. No paper will be accepted by the general program committee nor by a section program committee unless accompanied by a synopsis of not to exceed one hundred words.

6. Papers shall not be "read by title."

7. No member may present more than one paper at any one State meeting, provided that members may present additional papers before sections on technical specialties; and provided further, that a member may be a collaborator on more than one paper, if these papers are presented by different authors.

8. Failure on the part of an author to present a paper precludes acceptance of future papers from such author for a period of two years, unless the author explains to the satisfaction of the Publicity Bureau his inability to fulfil his obligation.

RESOLVED, by the Council, That the recommendation of the Publicity Bureau be approved.

Auditor's Reports and Financial Statement for the year 1921—The secretary and the attorney presented the auditor's report for the State Society and for the Indemnity Defense Fund and the Financial Statement of the office for the year 1921: Upon motion, it was,

RESOLVED, That these reports should be accepted and placed on file.

Cost of Hospital Care—Clipping bureaus show that cheap costs of operating a hospital and otherwise caring for the sick are still items of sufficient interest to call for prominent headlines. The clipping bureaus show many reports of hospitals that take great pride in caring for their sick people at from 75 cents to \$1.50 a day. Any person, even the least bit familiar with the facts, or even the facts of what it costs well people to live, can appreciate something of the care that patients get in institutions of this kind.

Annual Meeting

State Society

May 15 to 18, 1922

Yosemite Valley

Make Your Reservations

NOW

COUNTY SOCIETIES

Alameda County Medical Society (reported by C. L. McVey, secretary)—On the evening of February 15, 1922, the annual banquet of the association was held at the Hotel Oakland, with one hundred members present. Dr. George W. Crile was the speaker of the evening. His subject was "Special Points in Abdominal Surgery," and talk was illustrated with lantern slides.

The meeting was held on February 20, 1922, at the Public Health Center, with Dr. George Rothganger in charge of the program.

Dr. Reinle read a paper upon "Kidney Infection." He emphasized the necessity of complete Urological examination in cases where urinary findings repeatedly show the presence of pus. He also brought out a new classification which described more particularly the kidney pathology with which the Urologist has to deal. The paper was discussed by Drs. A. M. Meads, E. Spence Depuy, and W. A. Clark.

Dr. Herbert Gunn of San Francisco talked on Amoebiasis. He stated that Amoebic Dysentery was a misnomer and that the disease should be called by its proper name, Amoebiasis. He discountenanced all drugs except Emetine Hydrochloride Bismuth-iodide and Neo Salvarsan. The paper was discussed by Drs. C. L. McVey and Stewart Irwin.

Dr. P. K. Gilman read a paper on the surgical treatment of Amoebiasis, emphasizing the necessity for surgery of the appendix and gall bladder, in cases which were not cured by three attempts in medical treatment. He discussed the surgical drainage of the liver. He discountenanced the use of irrigation. The paper was discussed by Dr. L. P. Adams and W. A. Clark.

Dr. Palamontain spoke of the unemployment in the East Bay district and the presence of the influenza epidemic now active, and suggested that the society take some steps towards the betterment of the condition. The matter was referred to the committee of Clinic Relations and Public Health.

Fresno County Medical Society (reported by Thomas F. Madden, secretary)—The regular meeting of the society was held at the Commercial Club on March 7, with the following present: G. W. Walker, president, Robbins, Miller, J. R. Walker, Tupper, McConnell, Tillman, Kjaerbye, Couey, Schottstaedt, Divanovich, Tobin, Willson, Hare, Schiro, Stein, Collins, Cowan, Peterson, Cross, Steinwand, Doyle, Craycroft, Pettis, Montgomery, Sheldon, Staniford, Trowbridge, Madden. The paper of the evening was read by William Fitch Cheney of San Francisco on "Diseases of the Gall Bladder." The paper gave the author's classification of the diseases and went extensively into the modern diagnostic methods. Dr. Cheney was instructing again many of his old pupils and it was indeed a great pleasure to hear him. The discussion was opened by Dr. McConnell and he was followed by Tupper, Cross, Collins and Cowan.

On Tuesday, February 21, W. E. R. Schottstaedt of the Fresno City Health Board made an address before the local Lions' Club on "Problems of the Board of Health." His subject was well handled, and gave the layman an idea of what was being done by the board.

Kern County Medical Association (reported by Wm. H. Moore, Editor and Reporter)—At the December meeting of the society the following officers were elected for 1922: President, Joseph K. Smith; vice-president, Geo. C. Sabichi; secretary and treasurer, P. J. Cuneo; censor, Edward S. Fogg; 1922 delegate, F. J. Gundry; alternate, Francis Hamlin; editor and reporter, Wm. H. Moore.

A public health committee was appointed and consisted of Drs. Hamlin, Sabichi and Moore.

Frank J. Gundry presented a paper upon "Renal and Urethral Lithiasis," which was discussed by Moore and Smith.

At the meeting of the society on February 24, at the Kern County Hospital, Keeth S. McKee was elected to membership.

Wm. H. Moore presented a paper upon "Asthma." The different theories were discussed and the reasons given why we believe asthma an anaphylactic phenomenon. The experimental artificial sensitization in animals was reviewed. In man, sensitization is inherited as a dominant factor and follows Mendelian laws. Asthmatics are of two types, sensitized and non-sensitized. The treatment for non-sensitized types is the treatment of the bronchitis and cardio-renal conditions, with possible use of autogenous vaccines.

The sensitized types are four. First—Inspired, represented by pollens, dust, and hair from animals; second—ingested, shown by the egg and milk protein sensitization in babies and food sensitization in adults; third—bacterial, represented by any chronic infectious processes giving rise to bacterial absorption as an antigen; fourth—local pathological conditions allowing absorption, as shown by the results following clearing up of chronic sinusitis, and other nasal conditions.

Authorities disagree on the relation of asthma and tuberculosis. Treatment is symptomatic during the paroxysm, and after treatment depends upon the causative factor. Certainly all possible pathological conditions allowing absorption should be removed. Then by the cutaneous reaction we determine the protein causing the anaphylactic shock. Care must be taken that patient has not been taking K. I., or the traumatic and non-specific reaction cannot be told from the true specific skin reaction.

If the causative protein is inspired, as in pollens and danders, we desensitize or render the patient refractory by repeated injections of diluted solutions of proteins, usually starting with 1 to 1,000,000 dilution. If ingested, we eliminate the food from the diet. Bacterial, we use vaccine of the causative bacteria. Many excellent results have been obtained with autogenous vaccines.

Imperial County Medical Society (reported by Frances P. Elliott, secretary)—The regular monthly meeting of the society was held at the Barbara Worth Hotel, El Centro, February 22, with twenty members present. A. Stanley Granger of Los Angeles gave a very interesting paper on "The Interpretation of Some of the Newer Diagnostic Methods and their Relation to Treatment." The members met at dinner preceding the business meeting.

Marin County Medical Society (reported by Chester A. DeLancey, secretary)—Due to the large number of influenza cases in Marin County, the regular meeting of the society was postponed, as all of the doctors have been kept busy night and day with these cases. There has also been a small epidemic of German measles, some of whose prodromal symptoms are similar to those of influenza.

Placer County Medical Society (reported by R. A. Peers, secretary)—A meeting was held at Auburn on the evening of March 11. Robert E. Eveleth of Roseville and Sidney Talbot of Nevada City were elected to membership. The program for the evening was as follows: "An Outbreak of Epidemic Jaundice in Nevada City, California," by A. H. Tickell, in which he reported twenty-two cases of this disease occurring in his practice during the past few months. While there may have been other cases in the State, these are the first cases to be reported in California. Richard W. Harvey, assistant professor of neurology in the University of California, gave an address on "Headaches"; and M. S. Woolf, instructor in surgery of the University of California, gave an address on "The Treatment of Varicose Ulcers." The secretary read a communication from the State Society in reference to the Indemnity Defense Fund and urged all members who had not already taken advantage of this fund to do so at once.

San Benito County Medical Society—The society met March 8, 1922, at a round-table conference with W. E. Musgrave, the State secretary, and F. H. Paterson, councilor for the fifth district. Officers for the ensuing year were elected as follows:

Lenard C. Hull, president; Richard W. O'Bannon, vice-president; Chester W. Merrill, secretary-treasurer; Emma E. McKay, delegate to the State meeting and Joseph M. O'Donnell, alternate.

San Bernardino County Medical Society (reported by E. J. Eytinge, secretary)—The society met on March 7, with twenty members and five guests present and fifty-one absent. Harold Hill, M.D. of San Francisco addressed the meeting on "Recent Developments in Influenza," drawing some interesting comparisons between the epidemics of different years and describing the types of secondary infection which are likely to follow, especially the 1918 epidemic. Other papers were given by T. A. Card of Riverside on "Conduct of Second Stage of Labor," and W. Clifford McKee of Los Angeles on "The Management of the Third Stage of Labor, together with Changes in the Haemoglobin During the Puerperium." Discussion on these papers was opened by E. W. Burke.

San Francisco County Medical Society (reported by LeRoy H. Briggs, secretary)—The general meeting was held on February 14 and was devoted to Newer Methods in the Treatment of Tuberculosis, with papers by L. S. Mace on Pneumothorax in the Treatment of Pulmonary Tuberculosis; Leo Eloesser on Operative Compression of the Lungs in Pulmonary Tuberculosis, and Esther Rosencrantz on the Rollier Treatment in Tuberculosis (Heliotherapy). Dr. Rosencrantz said in part as follows:

"The Rollier method was introduced into the tuberculosis wards of the University of California service of the San Francisco Hospital and applied to both surgical and pulmonary cases.

Rollier established his first sanatorium in 1903 at Leysin, Switzerland, a mountain village 4500 feet above sea-level. Because of the purity and dryness of the atmosphere, the caloric and luminous radiation of the sun suffers very little loss. In midwinter with deep snow on the ground the temperature often reaches 95 degrees or higher.

The treatment consists in exposing the body of the patient to the rays of the sun. This exposure is gradual, beginning with the feet alone for five minutes, repeating this three times during the day. Steadily this is increased, until the entire surface

of the body is exposed from early morn until sundown. It is the pigmentation resulting from exposure that is the essential element in the cure.

Rollier's method of heliotherapy was illustrated by stereoptican views showing patients before, during and after the treatment, with the restored function of the involved joints. The analysis of the 1129 cases treated in the ten years, 1903-1913, showed 951 discharged as cured and 112 as improved, 41 unimproved, and 31 deaths. In all there were only 12 relapses, and only upon ten had he operated.

The results are striking when one considers that the majority of patients had open tuberculosis with long-standing suppurative lesions, marked cachexia and amyloid disease, and were sent to him as the last hope.

There were five patients shown from the San Francisco Hospital who had received heliotherapy for many months. All were pulmonary cases; three had surgical complications as well. All showed absence of fever, marked increase in weight, the sputum negative for tubercle bacilli or absent altogether where it was positive upon entrance to the hospital. Of the surgical lesions the good results were most convincing of the efficacy of the treatment, even at sea-level. Heliotherapy is certainly a valuable adjunct in the cure of tuberculosis.

The Committee on Medicine met February 7. The program was as follows: "Bearing of Organic Disease in Childhood on Future Mental Derangement," by E. C. Fleischner; "Mental Case as Medical Case," by J. Wilson Shiels; "The Workings of the Insanity Commission and the Detention Hospital," by C. D. McGettigan. The following resolution was passed:

Resolved, That the San Francisco County Medical Society be memorialized to the following effect: That it is the sense of this, the Medical Committee of the County Medical Society, that a committee on psychopathic hospital be appointed by the president of the society; this committee to be a permanent one and to have for its object the furtherance of any measures that it may think proper toward the establishment of a psychopathic hospital in San Francisco.

On February 21 the Committee on Surgery met, with the following program: Principles Involving Fractures with Special Reference to Etiology and Treatment (illustrated by lantern slides) by Emmet Rixford.

The Committee on Eye, Ear, Nose and Throat met on February 28. This was a clinical meeting at the Eye, Ear, Nose and Throat Clinic of Stanford University Hospital. Demonstration of cases and equipment was made by the hospital staff.

San Francisco County Society—There are 1320 licensed physicians in the city of San Francisco. There are 738 members in the County Medical Society. The society wants better physicians and better medicine. The society wants every good medical man an active member. Individual effort is essential in the building of a good society. You believe in your profession, your society, and in organization for study. Will you secure one new member before the first of March? Tear off the appended application blank. Use it today. Get the applicant's signature. Have a friend endorse him. Sign it yourself. Drop it in the mail box. Do this for the good of the society. That you should bring one new member is not too much to request. San Francisco County Medical Society. LeRoy H. Briggs, secretary. Saxton Pope, president.

Sonoma County (reported by N. Juell, secretary)—A meeting was held March 16 at the office of J. H. Shaw, Santa Rosa, with twelve members present and twenty absent, and there were three guests. Dr. Tom Kelley, late co-worker of Dr. Martin Fisher of the University of Cincinnati, presented a paper on "Local Infections and Their Relation to Nephritis and Diabetes," which was very instructive and appreciated by all. Dr. Shaw gave a report of the meeting of the American College of Surgeons.

Stanislaus County Medical Society (reported by R. E. Maxwell, M. D., secretary)—The January meeting was held on the 20th in connection with a banquet in the Hotel Modesto with the following officers and members present: A. M. Field, M. D., president; J. K. Ransom, M. D., vice-president; R. E. Maxwell, secretary and treasurer; E. F. Reamer, Katherine Hurst, B. F. Surryhno, E. F. Hagedom, J. E. Hosmer, L. L. Mottram, F. R. DeLappe, E. R. McPheeters, J. L. Hennemuth, C. B. Benson and F. W. McKibbin.

Eugene S. Kilgore, M. D. of San Francisco, discussed the subject of "Treatment of Infections of the Heart." He emphasized the importance of correct diagnosis to avoid, on the one hand, the development of cardiac neuroses through overattention to functional murmurs and innocent arrhythmias, and, on the other hand, the missing of active heart infections in the frequently insidious stage of invasion. The latter cases are usually young subjects with poorly defined rheumatic infections and often without characteristic murmurs. In the quiescent stage of endo-, myo-, or pericarditis, focal infections should be eradicated and exercise adjusted (sometimes increased and sometimes diminished) to maintain compensation and emergency reserve power. Decomensation, if possible, should be treated in its incipency; and before the usual signs of passive congestion, teleoroentgenograms are valuable for diagnosis. Illustrative lantern slides were shown. The discussion of digitalis and quinidine included indications, therapeutic effects and dangers. The importance of early diagnosis of syphilitic infections was pointed out. This is rendered difficult by the variety of early symptoms and the late appearance of typical physical signs. Teleoroentgenograms were shown to illustrate their aid in early discovery of disease in the aortic arch. A regime of antiluetic treatment was outlined. A meeting was held at Hotel Modesto, February 17, with the following members present: A. M. Field, J. K. Ransom, R. E. Maxwell, J. E. Hosmer, F. W. McKibbin, J. C. Robertson, F. K. DeLappe, J. W. Reed, E. F. Hagedom, C. H. Griswold, E. R. McPheeters, B. F. Surryhne, R. W. Brace, Clara Finney, J. Cooper, L. Mottram and E. F. Reamer. Max Rothschild, medical director of the California Sanatorium, addressed the society on "Modern Treatment of Tuberculosis." He said in part:

"The above title is an ambitious one and it is the intention of my address to touch only on one phase of the specific and non-specific treatment, the treatment with partial antigens and that with artificial pneumothorax. The important feature in the specific treatment is a correct diagnosis of the prevailing pathology. We have to differentiate between the exudative and the productive type of pulmonary tuberculosis; the exudative type starts in the parenchyma of the lungs and, if it progresses, leads to caseous pneumonic and afterwards to cavity formation. The other type, the productive, begins in the connective tissue and is usually followed by cirrhotic and indurating processes. Each condition appears in its pure type only in the incipency of the disease. The more the condition progresses, the more the different types merge into each other. For the diagnosis of the correct pathological con-

dition we have to depend upon the history of each case, upon the clinical examination and observation, upon the X-ray examinations and chiefly on the immune-biological tests. In the exudative type the treatment with old tuberculins, or toxic tuberculins, is strictly contraindicated, and in those cases the treatment with the partial antigens of Much-Deycke has given excellent results when properly used. But wherever it is possible to use the treatment with artificial pneumothorax, no matter if the case belongs to the exudative or to the productive type, this treatment is strongly advocated. The chief contraindications with artificial pneumothorax are involvement of both sides and extensive adhesions on the afflicted side."

The address was closed with demonstration of X-ray diapositives of cases treated with the partial antigens and with artificial pneumothorax.

Samuel H. Hurwitz of San Francisco spoke on: Causes and Treatment of Asthma, a consideration of the predisposing causes and some of the known etiological factors, with practical reference to protein hypersensitiveness and infection; Diagnosis of the Type of Asthma (a) The importance of history with special reference to the age of onset, the duration of the attack, the characteristics of the first attack, occupation and the exposure to the emanations of animals, to the pollen of plants, to certain proteins in the food and infection; (b) The technic and interpretation of protein skin tests; (c) The value of sputum cultures. He also discussed The Treatment of Asthma: (a) Symptomatic; the value of such agents as adrenalin, atropin, morphine, benzoyl and succinate; (b) Specific treatment with proteins and vaccines.

Santa Clara County (reported by E. P. Cook, secretary)—The February meeting of the Santa Clara County Medical Society was held February 15 at the Hotel Vendome and took the form of an annual banquet. About forty members were present, spent a delightful evening of good fellowship and listened to brief addresses by John H. Graves, president of the State Medical Society, and W. E. Musgrave, secretary of the State Society.

Tehama County Medical Society (reported by F. L. Doane, secretary)—At the meeting of the society held on February 2, the following officers were elected: F. H. Bly, president; J. A. Owen Jr., vice-president; F. L. Doane, secretary-treasurer.

The Health Officer—"Health conservation is a long step from the ordinary concept of a health officer's duties—i. e., water supply, milk supply, nuisances abated and communicable diseases controlled.

"Where any attempt to meet even this outlay of duties is made a laboratory service, both bacteriological and chemical, must be available. And yet, in the first demands on a health officer, child conservation comes to the front. Most adults take boiled milk—hence milk as a health menace covers infancy and childhood.

"Gross dairy inspection means some advance over a standard of 'visible dirt,' but nothing gives a line on the real technique of milking and handling of milk in any way commensurate with bacterial studies on a milk supply.

"A pasteurizing law which does not connect up with a laboratory control of the efficiency of pasteurization is not a contribution to public health." (Adelaide Brown, M. D., in the Bulletin of the California State Board of Health.)

MISCELLANEOUS

Another Examination for Chiropractors—The Board of Medical Examiners has announced from Sacramento that special examination for chiropractors, sanipractors and other drugless practitioners will be held in Los Angeles on April 11, 1922, open to all applicants who can fulfil the requirements of the law, i. e., (1) A California high school education or its equivalent; (2) Two thousand hours professional education completed in sixty-four weeks (just one-half the education required of a medical graduate); (3) A diploma from a legally chartered school teaching the above course; (4) Certificate of good moral character.

The subjects of examination are elementary as specified in the law governing the practice of the healing art in this State.

Chiropractors, sanipractors, as well as other drugless practitioners, who can fulfil the requirements and who are inclined to comply with the law, are again offered an opportunity to co-operate with the Board of Medical Examiners in its purpose to segregate the qualified chiropractors as well as other drugless practitioners, from the unqualified now engaged in waging a campaign of misrepresentation against those who evidence an honest intent to obey the law.

Subsequent to this special meeting announced for April 11, a regular meeting of the board will be held in Native Sons' Hall, San Francisco, June 26 to 29, 1922, when examination will again be offered gratified applicants.

The Newer Medicinal Chemicals—Dr. Alfred S. Burdick, president of The Abbott Laboratories, Chicago, in a recent address emphasized the rapid growth of American chemistry through co-operation of all research agencies in this country.

Concrete examples of American achievements in synthetic chemistry were recited, and a plea made for the support of the medical and pharmaceutical professions to preclude the possibility of our again becoming dependent upon foreign sources for chemical supplies. The history of arsphenamine, barbital, cinchophen, neocinchophen, chlorazene, procaine, the benzyl esters and other synthetic medicinal chemicals was outlined. Announcement was also made of a number of new chemical bodies recently developed, and others on which research work was now being done by The Rockefeller Foundation, various universities, the American Medical Association and certain other laboratories.

In conclusion, Dr. Burdick urged both physicians and pharmacists to prescribe and dispense medicinal chemicals by the newer American names, rather than to perpetuate the pre-war dominance of foreign synthetics. This position was supported by the Council on Pharmacy and Chemistry of the American Medical Association, in whose laboratories American medicinal products have been analyzed and found to be equal and in some cases superior to foreign-made products.

Class Reunion—The class of 1912, the last class to graduate from Cooper Medical College, now Medical Department Stanford University, had a very enjoyable dinner and theater party on February 18th, to celebrate the tenth anniversary of the graduation.

At the dinner plans were formulated for a class reunion at Yosemite Valley in May, at the time of the Annual Meeting of the California State Medical Society.

Letters and telegrams were read from H. D. Barnard, Geo. C. H. Franklin, Allen D. Powers, C. E. Stagner, Geo. J. Hall, S. P. Strange, and E. J. Casper, who through illness or other unpreventable occurrences were unable to attend.

Those who attended were: H. O. Claland, W. M. Malone, F. W. Kroll, J. R. Dillon, R. H. Parkinson, J. H. McClelland, V. V. Hardeman, T. U. Sigwert, A. E. Schmidt, from San Francisco; W. A. Beattie from Sacramento, L. L. Stanley from San Quentin, R. E. Allen and Ream Leachman from Vallejo, N. T. McArthur from Napa, T. S. Long from Cambria, S. W. Dowling from Santa Cruz, and N. T. McNeil from Stockton.

California Association of Physiotherapists (reported by Hazel E. Furscott, president)—A meeting of the active members of the California Association of Physiotherapists was held March 8, and instead of the usual program plans were discussed for a constructive program which would add to the progress of physiotherapy and include all members in its execution. It was decided to take up the following problems:

1. A survey of physiotherapy schools in the United States, Canada, and Europe;
2. Compilation of a physiotherapy bibliography;
3. Survey of physiotherapy in the State of California.

The machinery to carry out this plan will be by committees which will include all active members of the association. In this way, it is hoped to obtain valuable information as well as to stimulate interest of every member by having them definitely contribute to their association.

Remedies for Certain Defects in Medical Organization and Service—(Monthly Bulletin Department of Health, New York City, December, 1921.) Lewis I. Harris, M. D., director of the Bureau of Medical Diseases of New York City, in the article in question has discussed in a most able manner a number of most important problems confronting the medical profession. Any physician interested in the welfare of his profession and interested in better medicine for all the people should by all means read this article. There are statements in the article to which most physicians will not subscribe, but these are few and are lost sight of in the broad, constructive program that Dr. Harris has outlined. Persons desiring to read this article can no doubt get it by addressing the Department of Health, New York City, and making request for a copy.

New Preparations Accepted by the Council on Pharmacy and Chemistry—During the month of February the Council accepted the following articles:

Persson Laboratories:

- Bacillus Coli Antigen (No. 50)—Persson.
- Furunculosis Vaccine Mixed (No. 37)—Persson.
- Gonococcus Antigen (No. 47)—Persson.
- Staphylococcus Aureus Antigen (No. 49)—Persson.
- Streptococcus Antigen (No. 48)—Persson.
- Pneumonia Vaccine (No. 36)—Persson.

Powers-Weightman-Rosengarten Co.:

Novarsenobenzol—Billon.

G. H. Sherman:

- Whooping Cough Vaccine—Sherman.
- Mixed Typhoid Vaccine—Sherman.
- Acne Staphylococcus Vaccine—Sherman.
- Alypin.

Winthrop Chemical Co.:

Shall We Be Wrecked by Realism?—There is a useful lesson in this little article by Thomas L. Mossan in the World's Work for February, page 435.

BOOKS RECEIVED

American Illustrated Medical Dictionary (Dorland).

A new and complete dictionary of terms used in medicine, surgery, dentistry, pharmacy, chemistry, veterinary science, nursing, biology, and kindred branches; with new and elaborate tables. Eleventh edition, revised and enlarged. Edited by W. A. Newman Dorland, M. D. Large octavo of 1229 pages with 338 illustrations, 141 in colors. Containing over 1500 new terms. Philadelphia and London: W. B. Saunders Company, 1921. Flexible leather, \$7 net; thumb index, \$8 net.

Solutions (in ten lessons). A manual for use in training schools for nurses. By Elsie M. Smith, R. N. Second revised edition. St. Louis: C. V. Mosby Company, 1921. Price, \$1.

Epidemiology and Public Health. A text and reference book for physicians, medical students and health workers. In three volumes. By Victor C. Vaughn, M. D., LL. D. Assisted by Henry F. Vaughn, M. S., Ph. D., and George T. Palmer, M. S., Ph. D. Volume 1, Respiratory Infections. St. Louis: C. V. Mosby Company, 1922. Price, \$9.

Clinical Diagnosis. A textbook of clinical microscopy and clinical chemistry for medical students, laboratory workers, and practitioners of medicine. By Charles Phillips Emerson, A. B., M. D. 156 illustrations. Fifth edition entirely rewritten and reset. Philadelphia and London: J. B. Lippincott Company, 1921.

Submucous Resection of the Nasal Septum. By W. Meddaugh Dunning, M. D., consulting otologist, Fordham Hospital, N. Y. C. New York: Surgery Publishing Company, 1921.

Lessons on Tuberculosis and Consumption for the household showing how to prevent tuberculosis, how to recognize its first symptoms, how to win back health. By Charles E. Atkinson, M. D. Illustrated. New York and London: Funk and Wagnalls Company, 1922.

Physicians' Responsibility Under the Industrial Accident Law—The Industrial Accident Commission in a recent circular letter has again called the attention of physicians to Section 53 of the Industrial Accident Law of California. The section provides that every physician or surgeon who attends an employe for injury arising out of or in the course of the employment shall make a report direct to the Commission. This report is due from every physician or surgeon who attends an injured employe, regardless of the class of employment, regardless of whether the employer carries insurance or not, regardless of the fact that the practitioner may also be in the employ of the same employer, and regardless of any and all insurance carriers. If the employer is insured, a copy of the report should be sent to the insurance carrier, as it is of equal importance that they also be notified promptly.

A QUICK AND EASY METHOD FOR THE REMOVAL OF PLASTER CASTS

The removal of heavy plaster casts is practically always a tedious task for both surgeon and patient: the one wearing out his hands with the exertion of cutting and the other his nervous system with the expectation of being cut. At least this has been my observation, and is especially true when 5 to 10 per cent of cement is added to the plaster to increase its strength, as is done in the hospitals of this community.

This cement mixture makes a most satisfactory cast and one that will stand a great deal of rough handling and strain, but it is also very resistant to incision.

A given amount of plaster seems to offer about the same resistance to saws, knives, scissors and all other types of instruments, whether or not the plaster is moistened with acetic acid or any of the other substances which have been suggested as solvents. When solvents are used in sufficient amounts to be of assistance, time is consumed in waiting, and the cast is usually destroyed for further use.

These difficulties have often made me wish that my casts belonged to someone else, when it came to removing them, until I learned that the cloth is easily cut after the plaster has been powdered. This is accomplished by striking quick light blows on the cast along the desired line of incision with a small tack hammer or similar instrument, by which the consistency of the plaster is broken. When this is done, the remaining soft bandage may be easily cut with a knife or scissors.

It is better to break the line over soft tissues, when possible, than over areas where bones are prominent; however, this is not necessary, and the use of reasonable care does not bruise or abraid even in the latter areas. In many instances the area of the cast which is being struck can be completely lifted from the underlying tissues by exerting pressure on the opposite side of the cast.

Plaster does not fracture beyond the areas of impact, and, therefore, does not depress into the underlying tissues. This, however, makes it necessary to overlap the blows in order to completely break the plaster in the line.

Casts which are desired for further use are not destroyed by this method to any greater extent than when removed by simple cutting.

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NATIONAL BOARD OF MEDICAL EXAMINERS

The dates for the next two examinations of the National Board of Medical Examiners are as follows:

Part I and II, June 19, 20, 21, 22 and 23, 1922.

Part I and II, September 25, 26, 27, 28 and 29, 1922.

Applications for the June examination should be in the Secretary's Office not later than May 15, and for the September examination not later than June 1. Application blanks and circulars of information may be had by writing to the Secretary, Dr. J. S. Rodman, 1310 Medical Arts Building, Philadelphia, Pa.

Paternalism, the Most Subtle and Sinister Enemy of Popular Government—On November 18, 1921, Congressman Frank L. Greene of Vermont delivered an address before the House of Representatives that ought to be read by every physician and every other thinking citizen of this commonwealth. Mr. Greene's subject happened to be Senate Bill 1039, but his remarks constitute a most thoughtful and sane protest against the everincreasing tide that is swinging toward paternalism and socialism in our government.

NEW MEMBERS

Charles A. James, Fresno; Paul S. Barret, Fresno; H. J. Ring, Ferndale; Caroline Rosenberg Maule, San Francisco; Wm. A. Sampson, San Francisco; Wm. H. Bingham, Gonzales; James F. Finnegan, Vallejo; R. E. Allen, Vallejo; Frances P. Elliott, El Centro; Ora B. Dunham, Brawley; Henry B. Graeser, Holtville; Franklin H. Carter, San Diego; Thomas M. MacLachlan, San Diego; Frank J. Ratty, San Diego; Chester O. Tanner, San Diego; Arthur Wegeforth, San Diego; Manuel L. Azevedo, Sacramento; H. H. Beck, Yreka; Alverda E. Reische, Oakland; Alonzo D. Snyder, Corning; Frank E. McCann, Corning; L. E. Chapman, Gerber; Horace A. Hall, Arlington; John Jacob Kacher, Palm Springs; Wm. M. Miller, Riverside; Harry W. Smiley, Indio; Victor d'Ercole, San Francisco; W. E. Carter, Los Angeles; Thos. J. Crowley, San Francisco; L. H. Watkins, Los Angeles; Philip B. Newcomb, Los Angeles; Margaret M. York, Glendale; Joseph S. Cipes, Los Angeles; Harry J. Powers, Los Angeles; Milan J. Hart, Pasadena; Carl E. Conn, Los Angeles; Geo. B. Bormann, Los Angeles; Gavin S. Herbert, Los Angeles; Sterling N. Pierce, Los Angeles; Harvey D. Thornburg, Los Angeles; Edwin R. Butterfield, Los Angeles; Thos. McHugh, Los Angeles; Gilbert R. Owen, Los Angeles; H. N. Mayo, Los Angeles; W. B. Mayo, Los Angeles; Charles E. B. Flagg, Pasadena; Louise D. Wagner, Pasadena; Edward C. Love, Danville; Josephine E. Platt, Pasadena; Walter P. Bliss, Pasadena; De Witt C. Bryant, Los Angeles; Robert H. Kennicott, Los Angeles; Hersel E. Butka, Los Angeles; Frank W. Kidder, Los Angeles; John D. Gillis, Los Angeles; James T. Papas, Los Angeles; Ralph A. Woods, Los Angeles; Ernest I. Mulder, Los Angeles; F. H. Brandt, Los Angeles; Hugo R. Chaloupa, Los Angeles; Floyd Thurber, Los Angeles; Ben E. Grant, Los Angeles; Harry J. Schott, Los Angeles; Hubert G. Wilbur, Long Beach; C. M. Sneden, Long Beach; H. M. Griffith, Pasadena; Geo. S. Martin, Susanville; H. J. Movius, Los Angeles; Robert H. Eveleth, Roseville; Sidney Talbot, Nevada City; S. S. Goldberg, Los Angeles; Henry S. Whisman, Agnew; Donald G. Davey, San Jose; Charles L. Ianne, San Jose; Ralph M. Smith, Calxico.

Transferred—Vard H. Hulen from Alameda County to San Francisco County; A. Gottlieb from San Francisco County to Los Angeles County; V. G. Alderson from San Bernardino County to Los Angeles County.

Resigned—A. W. Hitt, Los Angeles; T. R. Pratt, Los Angeles.

SOCIALIZED MEDICINE IN ENGLAND

The public press of England is furnishing some illuminating information about the workings of their so-called health insurance laws and particularly as to the sorry plight of both the public and profession in a country where State medicine of the government variety is so generally in force. We read that the Medical Practitioners' Union, after passing a resolution fixing an irreducible minimum fee at 13s. 6d., were forced by arbitration to accept 11s. as a "minimum wage." It seems that the government is about to try to force a still further reduction on the ground that other union wages are being reduced. The public, of course, is objecting to the amount of the capitation tax, and everyone is just about as unhappy as they might be expected to be under the state administration of a great personal service profession. Not so

long ago, the profession of England gave to the world constantly of its progress in the medical sciences. Fakers of various sorts and walking delegates seem to have most of the limelight now. Perhaps the most significant phase of the discussion is the general and drastic criticism of the powerful and expensive machine that has been built up for the administration of their intricate political law for the care of the sick. We are told that there is another side to the picture, but we are also told that this other side is sponsored only by those who are interested parts of the machine.

Shriners' Hospital for Crippled Children—The Board of Supervisors of the City and County of San Francisco on January 9 finally passed a resolution authorizing the Board of Trustees of the Shriners' hospital to maintain and operate a hospital for crippled children in the block bounded by Nineteenth and Twentieth avenues, Lawton and Moraga streets.

Napa State Hospital—The State Hospital at Napa is shortly to have repairs and extensions involving the expenditure of about \$85,000 most of which is for a new home for employees.

DEATHS

Wilcox, Glover B. Died in San Francisco, March 13, 1922. Was a graduate of the College of Physicians and Surgeons, Los Angeles, Calif., 1908. Licensed, 1911. Was a member of the Medical Society, State of California.

Corpé, S. L. Was killed in El Monte, Calif., when the car he was driving stalled on railroad track. Was a graduate of Hahnemann Medical College, Ill., 1894. Licensed in California, 1911.

Shepard, Gilbert. Died in Santa Cruz, Calif., March 7, 1922. Was a graduate of Hahnemann Medical College, Chicago, Ill., 1870. Licensed in California, 1896.

Peebles, J. M. Died in Los Angeles, February 16, 1922. Was a graduate of Philadelphia Medical and Surgical, 1876. Licensed in California, 1894.

Dale, H. M. Died in Los Angeles, February 27, 1922. Was a graduate of the Medical Department, University of Iowa, 1894. Licensed in California, 1901. Was a member of the Medical Society, State of California.

Rowell, George Ball. Died in San Bernardino, January 11, 1922. Was a graduate of McGill University, 1886. Licensed in California, 1888. Was 62 years of age and born in Canada.

Welch, Henry Seely. Died recently in San Francisco. Was formerly a surgeon in Second Regiment of Infantry, National Guard. Age 73. A graduate of Bellevue Hospital, Medical College of New York City, 1872. Licensed in California, 1876.

Macauley, Henry A. Died in Midway Island, November 28, 1921. Was a graduate of the University of New York, 1887. Licensed in California, 1910.

Toland, Marcellus R. Died in Los Angeles, February 5, 1922. Was a graduate of Southern Medical College, Atlanta, Georgia, 1883. Licensed in California, 1887.

Etcheverry, M. H. Died in San Francisco, March 1, 1922. Age 43. Was a graduate of the College of Physicians & Surgeons, San Francisco, 1902. Was a member of the Medical Society, State of California.